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### AVOIDS OIL STAINED GOODS

NON-FLUID OH, can prevent heavy losses from oil-spoiled goods because it is made to stay to loom hearings and do its job—batead of throwing or spattering.

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You might well ask how Sonoco research can possibly increase your profits! It can and does! Take Sonoco Dytex Tubes for example. Here is a product that has been accepted by the industry for all standard forms of package dyeing. When used with the exclusive Plastavon Sleeve, you have the perfect combination for better and cleaner dyeing.

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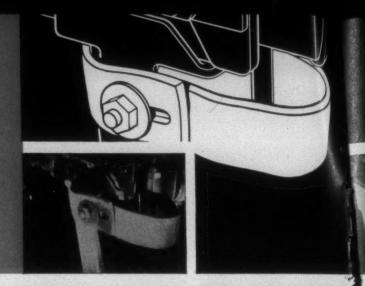


Products for Textiles

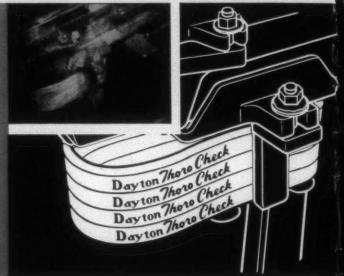
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In these unretouched high speed photos (insert) you see for the first time the uncontrolled checking action of a side-clamped one-piece check strap. These artist's drawings show this action enlarged.



Positive proof of the superiority of Dayton Endless Thoro-Check Straps is seen in these unretouched photos taken at 2500 frames per minute. This action is enlarged in the artist's drawings.



### High Speed Camera Reveals Action with

It happens so fast that no one has ever seen precisely how a check strap operates. That is, until Dayton photographed the action with a high speed camera exposing 2500 frames per minute. For the first time, you can see what actually happens in the less than 1/5 of a second it takes to cast the shuttle.

First, you see three unretouched frames taken from a film showing the action of a one-piece check strap. Photo #1 shows the picker stick midway in its stroke. Photo #2 shows how the one-piece check strap has begun to drag on the stick, interfering with the action.

You'll notice that the check strap is starting to climb the face of the stick and is being severely stretched at a point just ahead of the clamp.

Now look at the loose end of the one-piece check

strap in the second and third photos. The tuck which appears on the slack side of the strap indicates that the dragging action is so strong that the strap is jerked forward at an uneven rate of speed. (This action is impossible to see with the naked eye.)

With the hard wear they receive during this uneven checking cycle, it's no wonder that one-piece straps need constant adjustment and last only  $\frac{1}{3}$  to  $\frac{1}{2}$  as long as a set of endless Dayton ThoroCheck Straps.

Now, you'll want to see the action of a set of endless Dayton ThoroCheck Straps. The first of the three photos shows how the ThoroCheck Straps conform to the incline of the picker stick as it is whipped forward to cast the shuttle.

Photo #2 shows the Dayton ThoroCheck Straps



### Perfect Checking Dayton ThoroCheck Straps

slowing the picker stick to a smooth, graduated stop. Notice that there is no deformation of the endless straps and no evidence of any jerking action.

Photo #3 demonstrates the controlled elasticity of the ThoroCheck Straps as they assume their original shape at the end of this action.

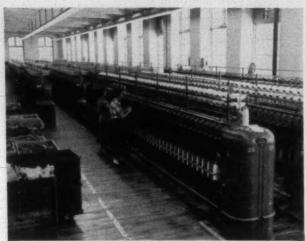
With the evidence before you, you can see why mill after mill reports that Dayton ThoroCheck Straps last longer, require less adjustment, and give vital shock protection to their looms.

If you'd like to see the actual film from which these photos were taken, ask your Dayton Representative when it will be available. Or, write The Dayton Rubber Company, Textile Division, 401 S. C. National Bank Building, Greenville, South Carolina.

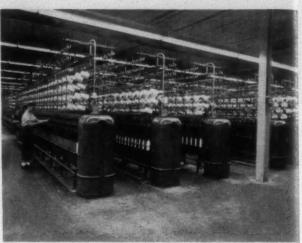
### Dayton Rubber

Dayco and Thorobred Textile Products for Better Spinning and Weaving

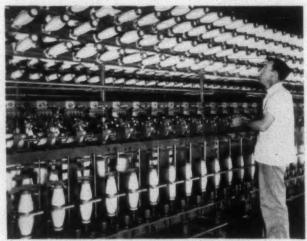
### Leesona Model 10 puts a wonderful twist on any yarn



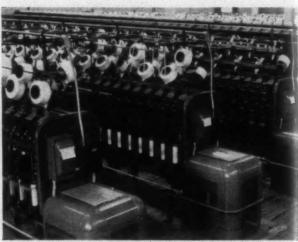
Twisting wool and worsted from spinning bobbins onto taper-top, take-up packages, as supply for winding machines.



Worsted, synthetic and metallic yarns from cones are plied together, twisted and taken up on large packages.



Twisting glass yarn from pirns to double-taper packages which will be used for filling and warping without rewinding.



Twisting Dacron\* directly from zero-twist cheeses onto straight wind bobbins for further processing on high speed UNIRAIL® Uptwisters.

The world's best yarns — and all the others too — natural or synthetic — spun or filament can be plied and twisted best on a Leesona Model 10 Ring Twister.

With it you twist single end yarn or combine two to 16 ends, with a twist range of ½ to 55 turns. Automatic stop motion for each end in the ply permits tying knots in singles.

Here's the most versatile of twisting machines ready for any kind of package delivery — cones, cheeses, cakes, pirns, spools, bobbins or tubes. Produces straight wind, taper-top or double tapered take-up packages (filling or warp wind).

For more facts and figures write for Leesona Model 10 Ring Twister Bulletin 10-A.

\*Dacron is a DuPont registered trademark



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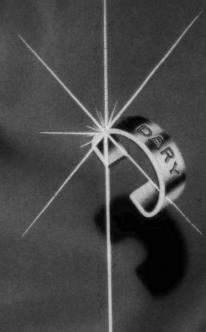
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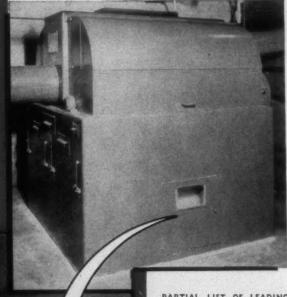
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The gentle buffeting action of the new type Whitin Axi-Flo cleaner results in greater dirt, grass, dust, mote and trash removal; improved blending; better stock quality; much lower power and maintenance costs. It is especially effective when preceded by Axi-Feed openers on blending feeders. Its outstanding performance has resulted in remarkably rapid acceptance by leading mills all over the world.

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Cotton Grade	Average percent Waste Removal	Cotton Grade	Average percent Waste Removal
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SM	.6 - 1.0	LM	1.6 - 2.5
М	.7 - 1.6	sgo - go	2.0 - 4.0

Only unmatched cleaning performance could bring such speedy, world-wide acceptance



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### YOUR MILL CAN COMPETE MORE PROFITABLY WITH THIS KIND OF MODERNIZATION

Note the spinning frame in the picture. It has been modernized with specialized all Bahnson equipment. The resulting benefit is a greatly improved competitive position for this mill through substantial annual savings on direct labor costs and increased production of a better quality product. Co-ordinated modernization with one source added initial savings, too.

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In the modernization of this spinning room Bahnson co-ordinated the installation of the following specialized equipment, numbered in the illustration:

- 1. Bahnson OPEN-AIRE CREEL, the only open creel made of rugged steel with baked enamel
- 2. Bahnson CROSS-JET CLEANER for cleaning
- entire frame in addition to walls and ceilings.

  Bahnson COLLECTO-VAC for uniform collection of ends, lint, and fly through warp-free
- 4. Bahnson CENTRAL HEAT REMOVAL to take out heat from collection units and motor alley.

Bahnson representatives will be pleased to explain the application of this kind of modernization to your individual mill need. Write or call Bahnson today. No obligation.

Air Conditioning Vacuum Collection Central Heat Removal Cleaning

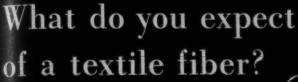
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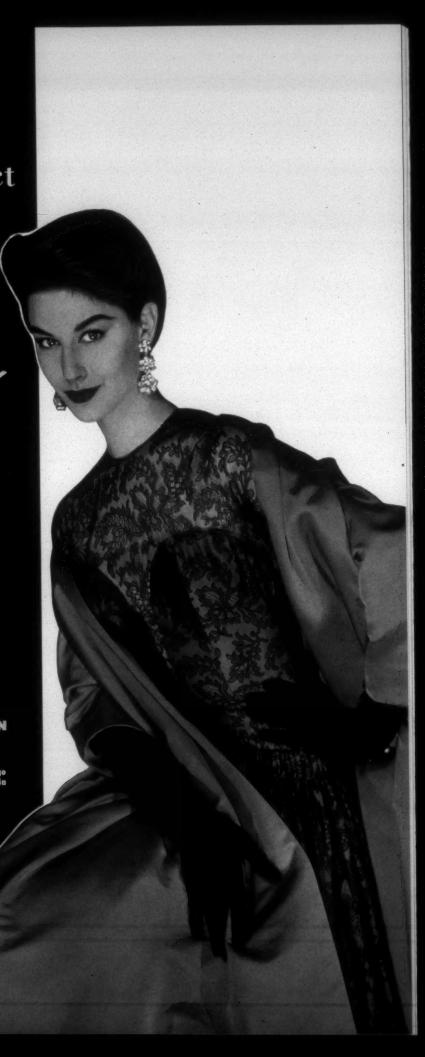
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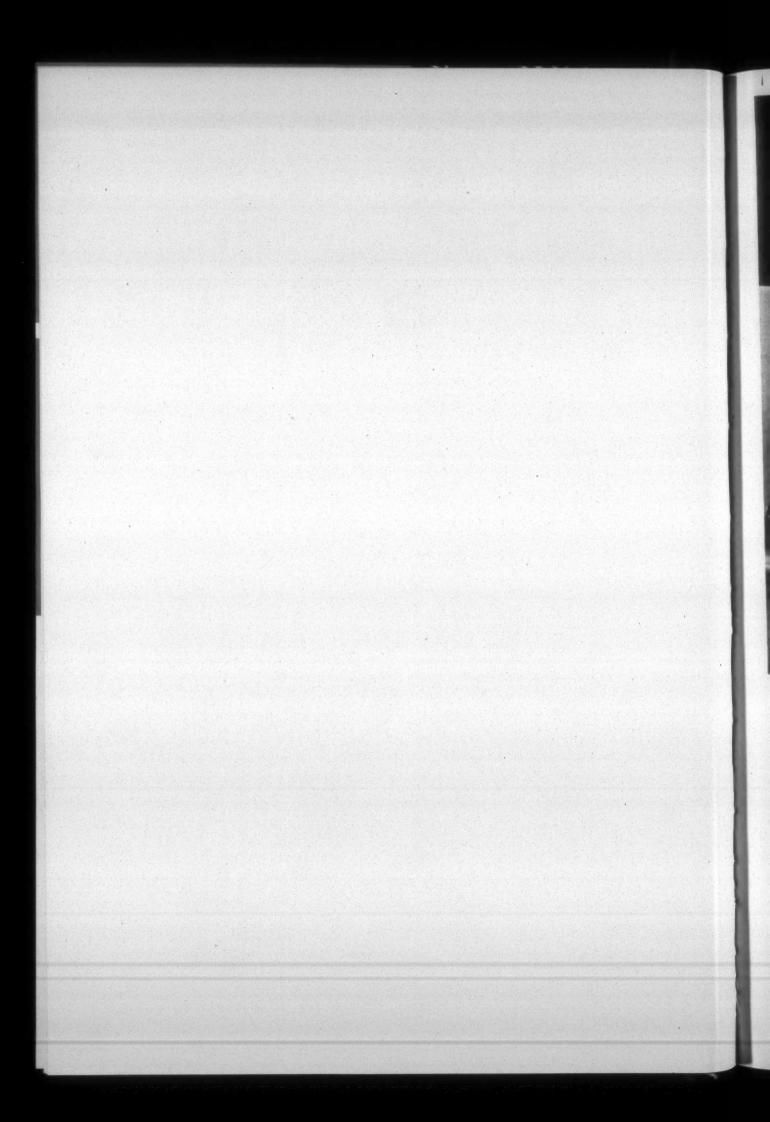
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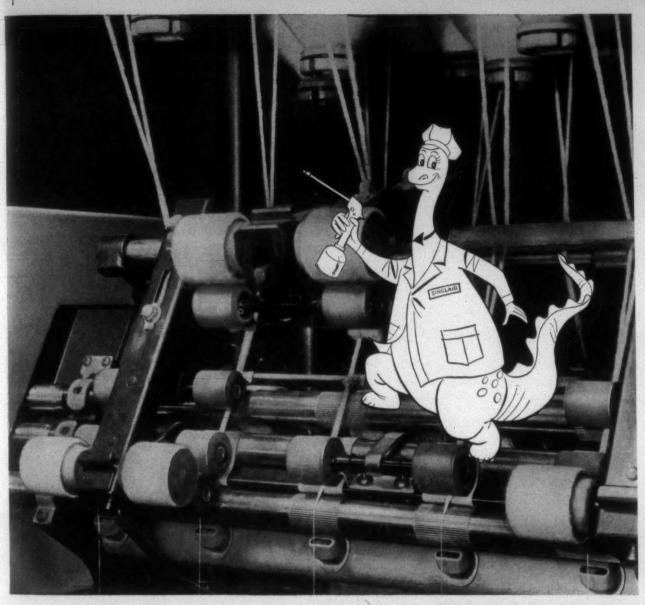
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Maintenance tips from Dino, the Sinclair Dinosaur

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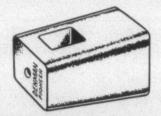
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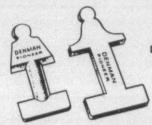


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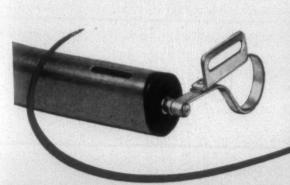
Pear-shaped for accurate positioning

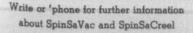
and easy piecing up

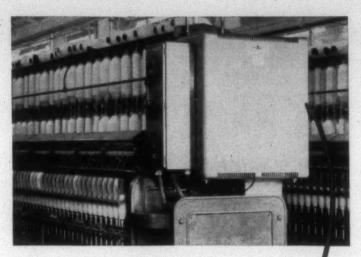
Conduits on frame interchangeable without adjustment

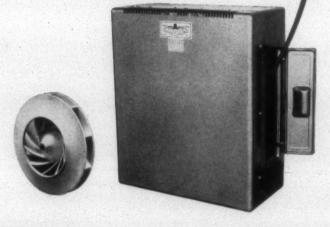
#### Vacuum Impeller

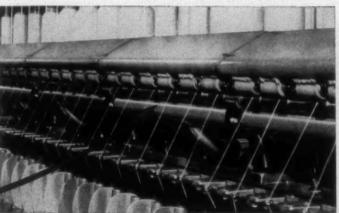
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GREAT BRITAIN BLEACHERS' ASSOCIATION LIMITED	COTONIFICIO FELICE FOSSATI S.P.A. Monz COTONIFICIO LEGLER S.A. Bergam
Blackfriars House, Parsonage, Manchester 3 In Eleven Branches as Follows: A. C. Bealey & Sons Ltd	MANIFATTURE COTONIERE MERIDIONALI Nape REGGIANI MANIFATTURA, S.A. Bergan TEXTILOSES & TEXTILES S.A. Milar
A. C. Bealey & Sons Ltd	TICOSA S.P.A. Con PRIMO FASOLA S.P.A. Mila COTONIFICIO FELICE FOSSATI S.P.A. Mila COTONIFICIO LEGLER S.A. Berpan MANIFATTURE COTONIERE MERIDIONALI Napa REGGIANI MANIFATTURA, S.A. Berpan TEXTILOSES & TEXTILES S.A. Mila MANIFATTURA TOSI. Busto Arsiz UNIONE MANIFATTURE S.A. Parabia COTONIFICIO VALLE DI SUSA TOTI ROBERTO CERANA Busto Arsiz CESARE CERANA Busto Arsiz IRIS S.P.A. Uruna GIOVANNI CLERICI E FIGLI S.P.A. Gallara
	JAPAN
John Whitehead of Elton Ltd.	TOYO SPINNING CO., LTD         Osa           TOYO DYEING INDUSTRY CO., LTD         Osa           KANEGAFÜCHI SPINNING CO., LTD         Osa           NISSHIN COTTON SPINNING CO., LTD         Tok           KUREHA SPINNING CO., LTD         Osa           TOYO SEN I. CO. LTD         Tok
Ashenhurst Dyeing Co., Ltd., Ashenhurst Works. Blackley John & Henry Bleackley Ltd. Myrtle Grove, Prestwich Adam Hamilton & Sons, Ltd., Blacklandmill. Paisley, Scotland Lowmoor & Water Lane Ltd., Woodroyd Dye Works. Low Moor	KUREHA SPINNING CO., LTD.         .Osa           TOYO SEN-I CO., LTD.         .Tok           FUJI SPINNING CO., LTD.         .Tok           HAMAGUCHI DYFING WORKS, LTD.         Kw
Lowmoor & Water Lane Ltd., Woodroyd Dye Works. Low Moor Standish Co. Ltd. Worthington nt. Wigan J. CHADWICK & CO., LTD. Springbrook Works, Oldham, Lancs. CLIFTON MILLS, LIMITED. Poolstock Mills, Wigan, Lancs. DEAKINS, LIMITED. Egerton Dye Works, nr. Bolton DROMONA & MAINE LIMITED.	FUJI SPINNING CO., LTD. Tok HAMAGUCHI DYEING WORKS, LTD. Kyo ICHISHIN BLEACHING CO., LTD. Osaka, Pr YAMATOGAWA DYEING WORKS, LTD. Sakai, Osa DAIDO DYEING COMPANY, LTD. Kyo KURASHIKI SPINNING CO. LTD.
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SMITH & NEPHEW TEXTILES LIMITED	
GROVE DYEING CO., LTD	ARIDA BROTHERS CORPORATIONTripoli, Leban
Albion Works, Pendleton, Salford 6, Lancs. PIN CROFT DYEING AND PRINTING CO., LTD Adlington, Lancs. RAINSHORE BLEACHING & DYEING CO., LTD Norden, Lancs. STEVENSON & SON, LTD Dungannon, Northern Ireland	MEXICO ACABADOS MEXICO, S.A
TURNBULL & STOCKDALE LTD.  Rosebank Print Works, Ramsbottom, nr. Manchester JOHN WALTON OF GLOSSOP, LTD.  Hollingworth, Cheshire DAVID WHITEHEAD & SONS, LTD.  Lower Mill, Rawtenstall YORKSHIRE DYEING & PROOFING COMPANY, LTD.	ACABADOS MEXICO, S.A
YORKSHIRE DYEING & PROOFING COMPANY, LTD. Spring Vale Works, Middleton, Lancs. YORK STREET FLAX SPINNING CO., LTD Belfast, Northern Ireland	CIA. INDUSTRIAL TEXTIL ANAHUAC, S.A
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BLIJDENSTEIN & CO., N. V	ELSA, S.A
VAN HEEK & CO., N. V	
J. F. SCHOLTEN & ZONEN N. V. Enschede N. V. STOOM-SPINNERIJEN EN WEVERIJEN V.H.S.J. SPANJAARD	A/S ARNE FABRIKKERYtre A

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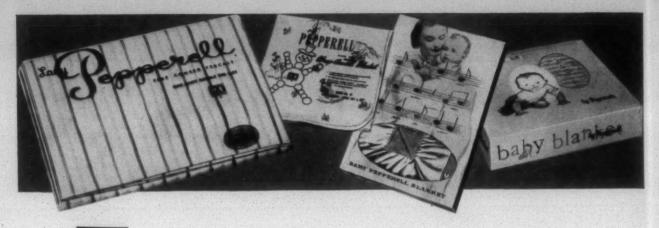
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PERU	FIELDCREST MILLS, INC
OMPANIAS UNIDAS VITARTE, VICTORIA, INCA, S.A. Lima ABRICA DE TEJIDOS "LA UNION" LTDA. Lima ABRICA DE TEJIDOS "LA BELLOTA", S.A. Lima EXTILES NUEVO MUNDO, S.A. Lima	GOLD-TEX FABRICS CORP.—Mill DivisionRock Hill, S. C.
ABRICA DE TEJIDOS "LA BELLOTA", S.ALima	GOSSETT DYEING AND FINISHING PLANT-
EXTILES NUEVO MUNDO, S.A	FRUIT OF THE LOOM, INC.—Pontiac Finishing Plant Pontiac, R. I.  GOLD-TEX FABRICS CORP.—Mill Division Rock Hill, S. C.  GOSSETT DYEING AND FINISHING PLANT— (The Abney Mills)
PHILIPPINES	GREAT FALLS BLEACHERY & DYE WORKS, INC.
ATIONAL DEVELOPMENT COMPANY	HAMPTON MILLS INC Easthampton, Mass
PORTUGAL	HIGHLAND PARK MANUFACTURING CO
ABRICA DE BRANQUEAÇÃO E ACABAMENTOS, LDAPorto	THE JEFFERSON MILLS, INCJefferson, Ga.
SOUTH AFRICA	THE JEFFERSON MILLS, INC
ERG RIVER TEXTILES LIMITED	THE LANCASHIRE TEXTILE PROCESSING  CORPORATION
SOUTHERN RHODESIA	CORPORATION
	LOWELL BLEACHERY, INC
AVID WHITEHEAD & SONS (RHODESIA) LIMITEDHartley	LYMAN PRINTING & FINISHING CO., INC.,
SPAIN	Subsidiary of M. Lowenstein & Sons, Inc
OBRINOS DE JUAN BATLLO S.A. Barcelona IBRACOLOR, S.A. Barcelona IUDA DE JOSE TOLRA, S.A. Barcelona OMERCIAL ANONIMA VILA Barcelona	THE MILLVILLE MANUFACTURING COMillville, N. J.
IUDA DE JOSE TOLRA, S.ABarcelona	MISSION VALLEY MILLS, INC
	NATIONAL DVEING & FINISHING COPPOPATION
SWEDEN	NEWBURGH PRINTING & FINISHING COMPANY, INC.  Newburgh, N. Y.  NORTH CAROLINA FINISHING COMPANY.  Salisbury, N. C.
LINGSAS BOMULLSVÄVERI AKTIEBOLAG. Alingsas ORAS WAFVERI AKTIEBOLAG. Boras AMLESTADENS FABRIKERS AKTIEBOLAG Göteborg EFLE MANUFAKTUR AKTIEBOLAG (Hargskoncernen). Stroemsbro IANUFAKTUR AKTIE BOLAGET I MALMO Malmö ÖLNLYCKE VAFVERIAKTIEBOLAG. Göteborg ORRKÖPINGS BOMULLSVÄFVERI A. B. Norrköpings	NORTH CAROLINA FINISHING COMPANY Salishury N C
AMLESTADENS FABRIKERS AKTIEBOLAG	
IANUFAKTUR AKTIE BOLAGET I MALMO	PACOLET MANUFACTURING CO
ORRKÖPINGS BOMULLSVÄFVERI A. B	PEPPERELL MANUFACTURING COMPANYLindale, Ga.
	OLD FORT FINISHING PLANT. Old Fort, N. C. PACOLET MANUFACTURING CO New Holland, Ga. PEPPERELL MANUFACTURING COMPANY Lewiston, Me. PEPPERELL MANUFACTURING COMPANY Lindale, Ga. PEPPERELL MANUFACTURING CO.— Alabama Division Pepperell, Ala. PEQUOT FINISHING PLANT, Division Indian Head Mills, Inc. Whitney, S. C. PILOT MILLS CO Raleigh, N. C. PLYMOUTH FINISHING CO., INC. Fall River, Mass. PURITAN LOOMS, INCORPORATED. Philadelphia, Pa.
SWITZERLAND   SWITZERLAND   Herisau	PEQUOT FINISHING PLANT, Division Indian Head Mills, Inc
G. FEHLMANN SOHNESchoftland	PILOT MILLS CO
ABIS-TEXTIL A. G	PURITAN LOOMS, INCORPORATEDPhiladelphia, Pa.
KTIENGESELLSCHAFT A. & R. MOOS	
I. MUELLER & CIE. A. GSeon	REEVES BROTHERS, INCORPORATED-
TOFFEL & CO	REEVES BROTHERS, INCORPORATED—
WILLIAM TO THE WEBER THE WEBER THE WARRENGE TO	THE RANDOLPH MILLS. INC
UNITED STATES	RIEGEL TEXTILE CORPORATION-
MERICAN FINISHING COMPANY Memphis, Tenn. HE APPONAUG COMPANY Apponaug, R. I. RISTA MILLS CO. Winston-Salem, N. C. RKWRIGHT FINISHING PLANT Fail River, Mass. RMS TEXTILE MANUFACTURING CO. Manchester, N. H. URORA BLEACHERY, INC. Aurora. III. VONDALE MILLS Alexander City, Ala. VONDALE MILLS Pell City, Ala. VONDALE MILLS Sylacauga, Ala.	RENFREW BLEACHERY (The Abney Mills)
RKWRIGHT FINISHING PLANTFall River, Mass.	
RMS TEXTILE MANUFACTURING COManchester, N. H. URORA BLEACHERY, INC	THE ROCKLAND BLEACH & DYE WORKS CO Baltimore, Md.
VONDALE MILLS	THE RUSSELL MFG. CO., INC
VONDALE MILLSSylacauga, Ala.	SAYLES-BILTMORE BLEACHERIES, INC.  SAYLES FINISHING PLANTS, INC.  SAYLES FINISHING PLANTS, INC.  SAYLES FINISHING PLANTS, INC.  Saylesville, R. 1.  PHILIP L. SHEERR & SONS.  Frankford, Philadelphia, Pa.  SOUTHERN BLEACHERY & PRINT WORKS, INC.  Taylors, S. C.  THE SPRINGS COTTON MILLS (Grace Bleachery).  Lancaster, S. C.  STANDARD BLEACHERY & PRINTING CO., INC. Carlton Hill, N. J.  J. P. STEVENS & CO., INC.—Appleton Plant.  Cheraw, S. C.  J. P. STEVENS & CO., INC.—Delta Plant.  Cheraw, S. C.  J. P. STEVENS & CO., INC.—Delta Plant.  Rock Hill S. C.
OS. BANCROFT & SONS CO	SOUTHERN BLEACHERY & PRINT WORKS, INC Taylors, S. C.
OS. BANCROFT & SONS CO	THE SPRINGS COTTON MILLS (Grace Bleachery)Lancaster, S. C. STANDARD BLEACHERY & PRINTING CO., INC., Carlton Hill, N. J.
URLINGTON INDUSTRIES, INC.,	J. P. STEVENS & CO., INC.—Appleton Plant
BURLINGTON INDUSTRIES, INC., Crametton Mills Division	
URLINGTON INDUSTRIES, INC., Mooresville Mills Division	J. P. STEVENS & CO., INC.—Utica-Mohawk PlantClemson, S. C. SUMMERDALE DYE WORKS
Old Dominion Finishing Company	SWIFT MANUFACTURING COMPANYColumbus, Ga.
ANNON MILLS COMPANY	TEXAS TEXTILE MILLS, INC
HICOPEE MANUFACTURING CORPORATION Canton, Ga.	THOMASTON MILLS-Bleachery Div
HICOPEE MANUFACTURING CORPORATION Gainesville Ga	UNION BLEACHERY
LEARWATER FINISHING PLANT	USF-ASPINOOK Finishing Division of Gera Corporation Norwich, Conn. USF-ASPINOOK Finishing Division of Gera Corporation Adams, Mass.
OMMANDER MILLS, INC	WERTHAN BAG CORPORATION
ONE MILLS CORPORATION—Carlisle Plant	YATES BLEACHERY COFlintstone, Ga.
ONE MILLS CORPORATION—Revolution DivisionGreensboro, N. C.	URUGUAY
ANTON MILLS COMPANY	S. A. FABRICA URUGUAYA DE ALPARGATASMontevideo
RANSTON PRINT WORKS COMPANY	VENEZUELA
RANSTON PRINT WORKS COMPANY	C. A. TELARES DE PALO GRANDE
OWIKEE MILLS  CORPORATION—White Oak Plant. Greensboro, N. C.  Eufaula, Ala.  BANSTON PRINT WORKS COMPANY. Cranston, R. I.  RANSTON PRINT WORKS COMPANY. Webster, Mass.  RANSTON PRINT WORKS COMPANY. Fletcher, N. C.  ROMPTON-SHENANDOAH CO. Waynesboro, Va.  RYSTAL SPRINGS BLEACHERY, INC. Chickamauga, Ga.	C. A. TELARES DE MARACAYMaracay
ALE BROOK FINISHING CO., INC. Ho-ho-kus, N. I.	
ANIELSON FINISHING CO., INC	•SANFORIZED•
Alabama Mile District National Property of the	TRADE & MARK
DEFIANCE BLEACHERY	Cluett, Peabody & Co., Inc. permits use of its trademark "Sanforized", adopted
PEMPSEV DI PLACTICAL MASS.	
DALE BROOK FINISHING CO., INC. Ho-ho-kus, N. J. PANIELSON FINISHING CO., INC. Danielson, Conn. AN RIVER MILLS, INCORPORATED. Danville, Va. Danielson, Conn. Danville, Va. Danielson, Conn. Danielson, Conlementation, Conference, N. C. RWIN MILLS INCORPORATED. Durham, N. C.	in 1930, only on fabrics which meet this company's rigid shrinkage requirements. Fabrics bearing the trademark "Sanforized" will not shrink more than



### Together... for over 50 years!

Pepperell Manufacturing Company in textiles; American Moistening Company in air conditioning ... both are well-known not only to the trade, but to each other! For it was over 50 years ago that the first Amco installation was made in a Pepperell mill. Moreover, it's a business association which has continued active right up to the present.

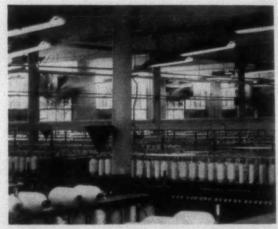
Amco's developments in improved methods of air conditioning today include a full list of carefully engineered devices, as well as all types of systems. So whether your requirements are for humidification alone; or in combination with cooling, such as in a ductless evaporative cooling system; or for a unit dry-duct system; or central station air conditioning... Amco can offer you the right system, composed of quality components, and based on engineering backed by seventy years experience in textile air conditioning.

Call on Amco for reliable advice. Amco engineers will be glad to suggest a solution to any air conditioning problem you may have. There is absolutely no obligation.



AMERICAN MOISTENING CO. • CLÉVELAND, NORTH CAROLINA
BRANCHES:
ATLANTA, GA. • PROVIDENCE, R. I. • TORONTO, ONT.





Amco cooling and ventilating installation in spinning room of Pepperell plant.

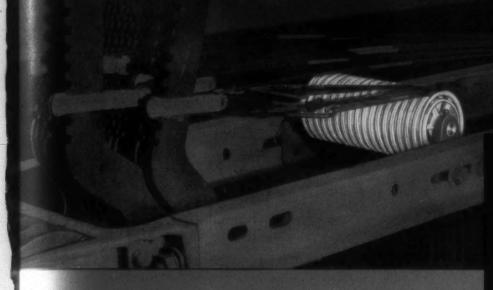


Some departments in the mill use straight humidification with Amco atomizers.

Amco unit dry-duct system installed in weave room.

### Are you getting 2 years of operating life

from your present dobby sheaves?



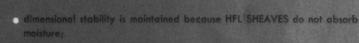


You can now...
with the astounding H
new development of

HFL

NYLON SHEAVES\*

Made of ZYTEL (DuPont's trade mark), controlled and prepared by us, HFL NYLON dobby SHEAVES have entirely eliminated the problems that existed in plastic and other sheaves formerly available to mills. Exhaustive tests in the HFL Pilot Weave Room, on looms carrying loads up to three times their normal requirements, prove that



- swelling, warping, flaking and seizing are gone . . . forever;
- heat is dissipated, thus prolonging the life of dobby cords;
- the special chrome plated HFL Dobby Shaft is an important factor in reducing friction and providing long, uninterrupted sheave service.

This is another milestone in the long series of HFL IMPROVED LOOM PARTS... another indication of continued Livermore leadership in research.

Send today for descriptive bulletin.

PATENT PENDING



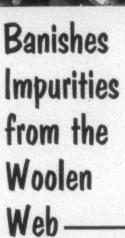
H. F. LIVERMORE CORPORATION

ESTABLISHED 1887

EXECUTIVE OFFICES & PLANT BOSTON 34, MASS.

GREENVILLE, S. C.

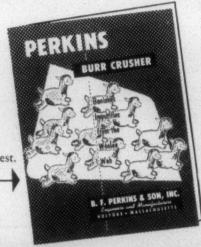
### PERKINS BURR CRUSHER



Perkins Burr Crusher Machines are manufactured by the original manufacturer of the first American-made Burr Crusher Machines during the early period of installation in this country and Canada, from 1941 to 1944. The machines are standard and the parts are readily replaceable on existing Burr Crushers now in operation. All moving parts subjected to wear, such as the chilled iron rolls, bearings, gears, studs and sprockets, are also standardized with the many Peralta Machines now in operation throughout this country and Canada.

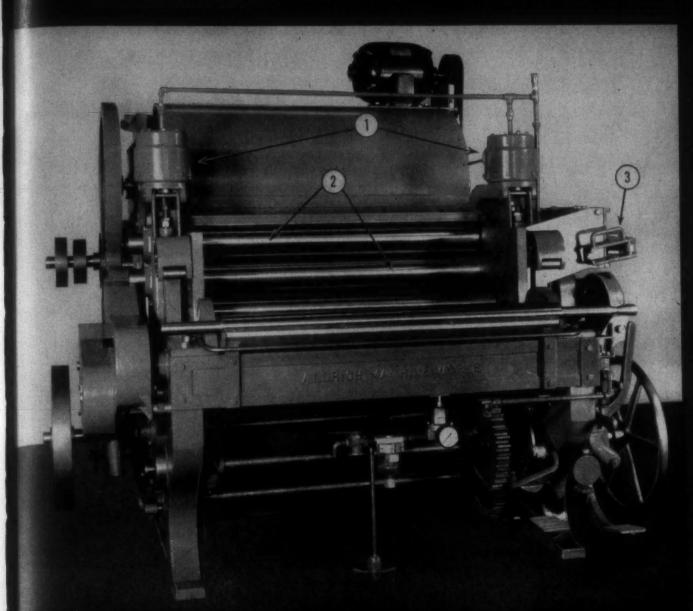
Machinery and Engineering Corporation of Amherst, New Hampshire, distribute and service the Perkins Burr Crusher Machines.

This bulletin, which gives complete Burr Crusher information, yours on request.



### B. F. PERKINS & SON, INC. HOLYOKE, MASSACHUSETTS

### **ALDRICH**



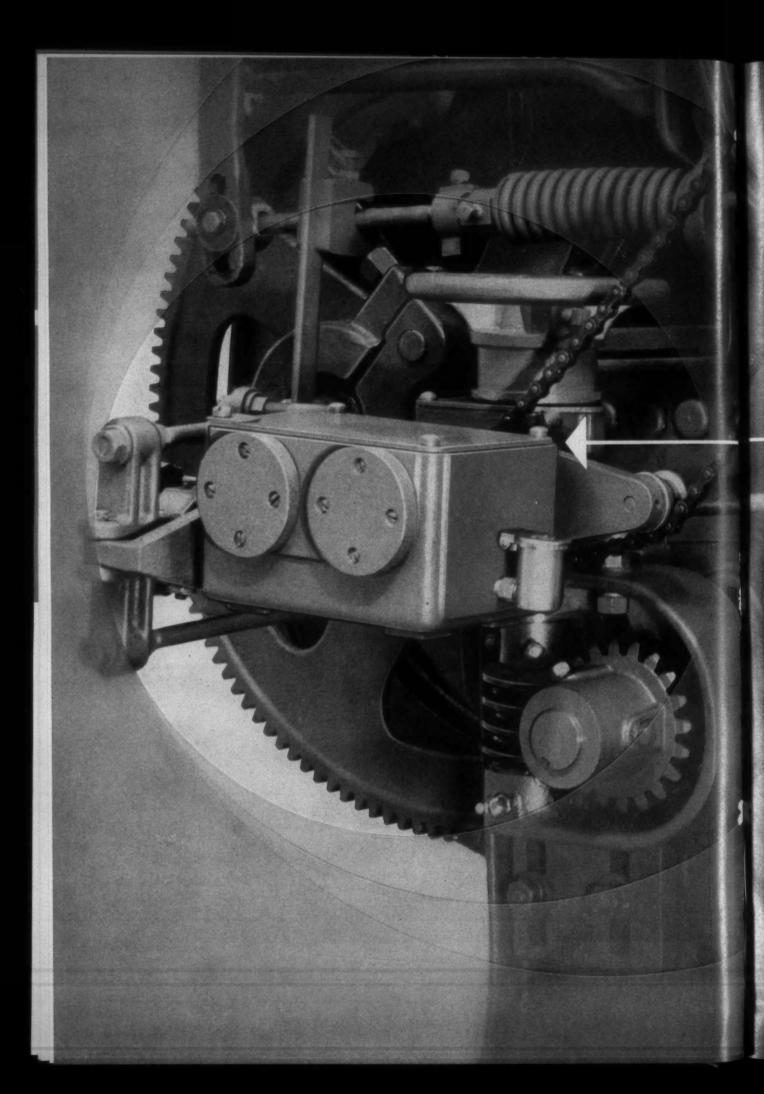
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AldricH MachinE WorkS

Greenwood, South Carolina



# DRAPER TRU-TENSION LET-OFF

### ... controls yarn tension *AUTOMATICALLY* from full to empty beam

The Draper Tru-Tension Let-off controls yarn tension by means of a positive, continuous drive and a compensating friction transmission.

The "Tru-Tension", a compact, precision built mechanism eliminates many cloth defects commonly attributed to the Let-off.

Simplified design provides for fast, easy application. The new "Tru-Tension" may be applied directly to looms having the conventional #4 Automatic Bartlett, Looms

equipped with other Bartlett Let-offs require a new Worm Wheel Shaft Housing.

Little or no adjustment is required from full to empty beam once the initial settings are established. On critical weaves, substantial savings are possible.

The Tru-Tension Let-off is currently available for X-2, XD, and XP model looms. For additional information on this and other Draper products, consult your Draper representative.



DRAPER CORPORATION

HOPEDALE, MASS.

Atlanta, Ga. • Greensboro, N.C. • Spartanburg, S.C.

### For the Textile Industry's Use

#### - NEW MACHINERY, EQUIPMENT AND SUPPLIES -

#### **Direct Turquoise**

A new direct turquoise, Pyrazol Fast/Cuprofix Turquoise FBL, has been developed by Sandoz Inc. and is recommended for cotton and viscose applications requiring a very high degree of fastness to washing, acid or gas fading, and perspiration. Brightness of shade and stability to acid or gas fading are among the advantages claimed for this dye. Good solubility makes it suitable for application by padding. It is also said to be of value for dyeing silk. Fastness to light is very good, and wet fastness is improved by after-treatment with Sandofix WE or UF, alone or in combination.

(Request Item No. B-1)

#### Weight Lever And Block Clip

A new type weight lever which assures the proper positioning of the stirrup and weight hook has been designed and manufactured by the Williams Machine & Tool Co. The company is also offering a new clip for holding wooden top roll bearing blocks in position. The spring clip device replaces the rivets which were previously used for this purpose and is said to make bearing block replacement so easy that even a spinner can do the job without the use of tools.

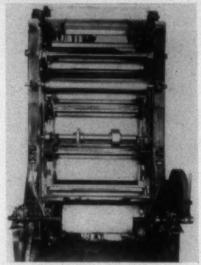
Uniform top roll weighting which results from the use of the new weight lever is reported to give a higher quality yarn with fewer ends down. With the new design it is impossible to put the stirrup in the wrong position or to hang the weight hook anywhere on the lever except in the proper place. Both of these errors, which are possible with the old style weight lever, reduce or increase the weight applied to the top rolls and may result in cockled yarn, hard ends, gouts, thick places, thin places, etc.

The spring clip which the company produces is reported to cut considerable lengths of down time on the spinning frames during overhauling. The rivets which normally are used to hold the wooden bearing blocks in place are difficult to remove when re-

placing the blocks. The spring clips slip on easily and hold the bearing block securely when the frame is running.

(Request Item No. B-2)

#### Roll Grinder



Portable roll grinder (B. S. Roy & Son Co.)

The Roy portable traverse roll grinder which can be used to redress rolls without removing them from their regular point-of-use has been developed by B. S. Roy & Son Co. This feature offers the advantage of not disturbing the bearing mounts of the roll

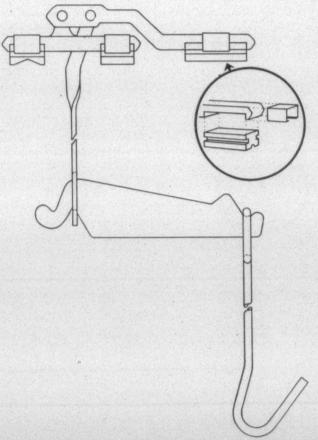
Successful applications are said to include redressing rubber, felt, rigid plastics, thermoset plastics, non-ferrous alloy, cast iron and steel rolls. Regrinding restores original roundness, straightness, contour and capac-

An independent variable-speed motor drive permits 1-man operation. Rolls of any diameter in lengths up to 100" can be reground to attain original efficiency. Each grinder features heavy ball-bearing braces and micrometer feed controls. Rolls with a very small diameter and width require a floor-frame Roy grinder.

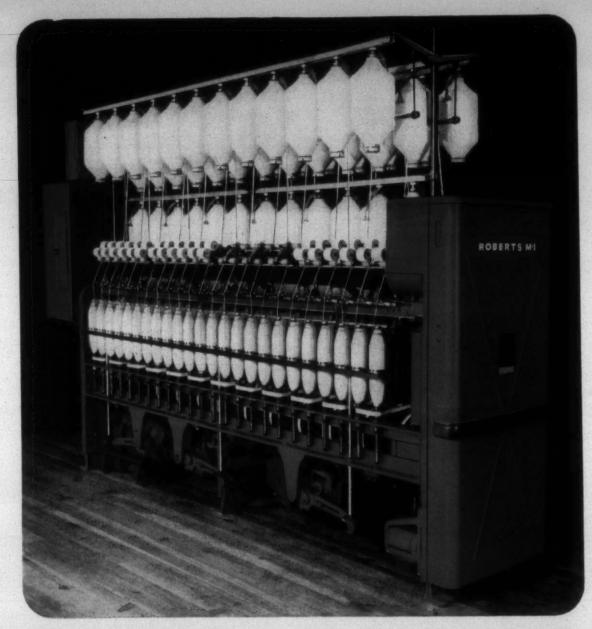
Complete servicing facilities will be maintained in Massachusetts and North Carolina. (Request Item No. B-3)

#### Cotton Comber

A new Hartford Cotton Comber has been announced by Platt Bros. (Sales) Ltd. of England. The design is based on the principles of the original model Nasmith Comber. Redesign of the most important mechanisms, close attention to engineering details and the introduction of many new features



The new design of this weight lever makes it impossible to put the stirrup in the wrong position or to hang the weight hook anywhere on the lever except in the proper place. The new spring clip device (circled) eliminates the use of rivets and greatly simplifies bearing block replacement. (Williams Machine & Tool Co.)



### ROBERTS SPINNING

#### ALL NEW-ALL BALL BEARING ROBERTS M-1 SPINNING FRAME

#### MODERN IN DESIGN

Into the rugged simplicity of the Roberts M-1 chassis has been built all the ball bearing features needed to provide the smooth operation and productivity for today's and tomorrow's production goals. Standard features include:

- FLEXIBILITY FOR COTTON AND SYNTHETICS
- BALL BEARING TOP ROLL SUSPENSION
- BALLOON CONTROL ARRANGEMENT
- **BUILT-IN UnitVac SUCTION CLEANING**
- EXTRA CAPACITY SPINDLES
- FULL BALL BEARING HEAD
- . 45 DEGREE ROLL STANDS
- LATCH-TYPE BOBBIN HOLDER AEROCREEL
- STEEL BASE RAILS, ROLL BEAMS, RING RAILS
- ADJUSTABLE DRAFT CONSTANT, 500 to 3000
- TURNKEY ERECTION AND STARTUP

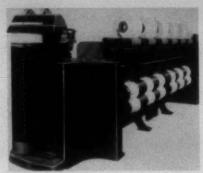
#### PROVEN IN PERFORMANCE

New Roberts Spinning has been running in the mill since February 1956 and has proven itself not only most economical in initial cost but low in maintenance. One large user with more than 200 frames in continuous production reports that the new Roberts Spinning runs with higher front roll speeds, better yarn quality and substantially lower ends down than the several thousand frames of other makes in operation in their mills.

#### ROBERTS COMPANY



#### FOR THE TEXTILE INDUSTRY'S USE-



The new Hartford cotton comber (Platt Bros. Ltd.)

have resulted in a simple, robust, quiet running machine processing heavy laps with resultant high rates of production at moderate speeds, according to Platt.

Specifications of the new comber are: six heads; up to 44 lbs. per hour at only 116 nips per minute; laps 480 to 960 grains per yard; slivers produced 40 to 60 grains per yard; and waste extraction controlled from 6% to 25%.

Other features are said to include: easy master settings for simultaneous adjustment of all nippers and top combs; smallest floor space per lb. of any modern comber; working efficiencies over 90%; 2 over 2 drafting system at draw box; automatic lubrication; single or bi-coiling into cans 9" to 14" diameter; stop motions and warning lights, ball bearings and automatic central lubrication system; and new safety devices and improvements.

(Request Item No. B-4)

#### Aluminum Trucks

A new line of lightweight aluminum trucks has been announced by Nutting Truck & Caster Co. Because of their light weight, the trucks are said to be ideal for off-motor truck delivery as well as for use in plants, warehouses and stock rooms, the company reports. They are available with safety loop type or double handles, 6x2'',  $8x1\frac{3}{4}''$ ,  $8x2\frac{1}{2}''$  or  $10x2\frac{3}{4}''$  roller bearing rubber tired wheels, and 7 or 9" noses.

(Request Item No. B-5)

#### Dow Chelating Agent

Versenex 80, a new chelating agent for use in the textile industry, is being produced in commercial quantities by The Dow Chemical Co. The product is effective in a broad range of chelating applications but is especially effective in controlling iron ions, according to Dow. Potential uses include the control of iron contamination in peroxide bleach baths and the control of iron and other heavy metals that degrade finished polymerized latex, the company easid

Versenex 80 differs from other Versene products in that it is based on diethylene-triamine while the latter are based on ethylenediamine. Because of its higher molecular weight, more Versenex 80 is needed to chelate a given metal on a weight

basis than is the case with other Versine products; however, the chelate structures formed with most metals are stronger and less susceptible to side reactions, Dow reports. Dow recommends evaluation of Versenex 80 in cases where metal-ion control by other Versene products has met with only borderline success. Samples of Versenex 80 are available on request.

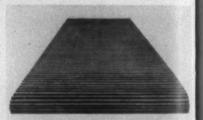
(Request Item No. 18-6)

#### Humidifier Cleaner

Vapco humidifier cleaner, a new product designed to quickly dissolve scale, corrosion, rust and solids from humidifiers and plates, is being marketed by Garman Co. Inc. Vapco humidifier cleaner is a safe dry powder packaged in 12-oz. cans. One can mixed with approximately 2 gallons of hot water is suitable for cleaning all makes and models of humidifiers, Garman reports. It is also pointed out that this same almost any appliance where water is evaporated and minerals are left behind.

(Request Item No. B-7)

#### Slatted Conveyor Apron



Hardwood slatted conveyor apron (Robert A. Main & Sons Inc.)

Hardwood slatted conveyor apron, recently introduced by Robert A. Main & Sons Inc., is shown in the accompanying picture. Hardwood slats are shown mounted on leather belts. Conveyor aprons can also be made using synthetic belts or chain. Wide aprons can be made to travel around small pulleys in confined spaces. Hardwood slats increase the life of aprons. Conveyor aprons also can be made with metal, aluminum or plastic slats. Aprons can be nade in widths up to 14 ft. and in any lengths. (Request Item No. 1-8)

#### Cationic Softeners

Introduction of two new cationic sub antive softeners, one of them available as a concentrate, is announced by Arnold, I offman & Co. Inc. Designated as Ahov I T and the Ahcovel P series, both are projects of continuing Arnold, Hoffman research

Ahcovel T is described as a versitle textile softener which performs effectively on cotton, viscose and acetate rayons, n lon, Orlon, Dacron, etc. Developed espe ally for use with cyclic urea resins, it of merit in both pure and resin finishes. V hen used with resins, Ahcovel T imparts thication and softness and higher strengths. No decrease in crease resis ance

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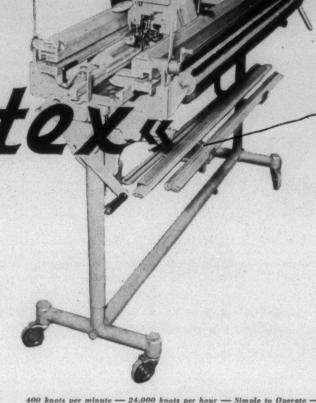
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WARP TYING MACHINE

an exceptional unit in design, function and precision workmanship.



400 knots per minute — 24,000 knots per hour — Simple to Operate — Increased Production — Permits 4 ways of Tying with One Unit — Economical in Cost and Maintenance.

Upon request, Reiner will demonstrate the striking advantages of this mill-proved warp tying machine at your plant door—without obligation.

- TIME, MONEY, AND MAINTENANCE ECONOMIES of impressive size are assured when you use the KNOTEX. Change-over from one tying group to another is a simple hand operation, a matter of minutes instead of hours, because no individual machine parts are changed.
- · EACH TYING-GROUP IS PRESET for sheet to sheet, lease to lease and sheet to lease in either direction.
- · PERFECTLY TIED WARPS, without doubles or misses, are assured by a fool-proof safety device.
- NO MAINTENANCE PROBLEMS because hand oiling is completely eliminated. Entire unit is immersed in a cleaning solution, drained and then run in an oil bath for a few minutes for complete lubrication.
- 12 SELECTIVE SPEEDS provide a wide range for any type of natural or synthetic yarn.
- TILTABLE TYING-IN STAND for loom tying adjusts vertically, horizontally and axially, hence cramped quarters, narrow aisles, etc., are no
- · OVER 400 OF THESE UNITS are in operation in 27 countries of the world.



SEEING IS BELIEVING — so why not ask us to bring our demonstration truck to your door, to prove that there is nothing quite like this KNOTEX Warp Tying Machine.

#### ROBERT REINER, INCORPORATED

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AN HONORED NAME IN TEXTILE MACHINERY SINCE 1903

TEXTILE BULLETIN . February 1958



#### FOR THE TEXTILE INDUSTRY'S USE-

is reported, nor is there any danger of chlorine retention damage due to the presence of Ahcovel T. Resistance is excellent to yellowing at normal processing and curing temperatures, according to the company, and finished fabrics will not develop odor on storage of the goods. Among outstanding characteristics of Ahcovel T are cited the fact that it is a pourable, fast dissolving, readily usable paste; its low forming properties; compatibility with most resin catalysts; excellent softening action for synthetic and natural fibers; high resistance to scorching and yellowing; increased tear strength of treated fabrics; high substantivity; good durability to washing; imparting of anti-static properties to hydrophobic fibers. Ahcovel T can be poured or pumped, the company reports, and can be added just as received to water or resin baths which are 120° F. or warmer, without previous pasting or diluting.

In the new Ahcovel P series, according to Arnold, Hoffman, are found many of the desirable qualities and characteristics inherent in the Ahçovels G and A. Durable and resistant to scorching or discoloration due to effects of heat, the Ahcovel P softeners are said to impart the pleasing soft hand which is important in processing as well as in fabric appeal. The series is specifically recommended for application to cotton or viscose rayon, either as pure finishes or as plasticizers in resin formulations. In resin applications, using Ahcovel P, resin-catalyst-softener compatibility is adequate under normal operating conditions and approaches that obtained with the more expensive Ahcovels. Increase in tear strength of resin treated fabrics approaches that obtained with use of Ahcovel G. Ahcovel P is a pourable paste which is readily dispersible in water at 90° to 100° F. Ahcovel P Conc. is a 100% (approx.) concentration of Ahcovel P, which permits a considerable saving to finishers who are equipped to do their own pasting.

(Request Item No. B-9)

#### **Packaged Boilers**

Cleaver-Brooks Co. has announced the development of the new model CB boilers in 250, 300 and 350 h.p. sizes. This expands the CB boiler line to 15 sizes, 45 models. The new units are said to include the following new developments:

(1) An inspirating pilot which establishes pilot flame with no gas pressure.

(2) A single-tip retractable nozzle that efficiently mixes air and oil and is removable for quick cleaning.

(3) Rotary air damper which provides smooth, positive air modulation without rumble or vibration.

The caseless fan construction of the new system is said to result in very quiet operation. The company says that the new boilers were pilot tested for months under many conditions of operation using many types of fuels.

The air atomizing burner on the boilers is a single-tip, retractable type which is clean burning even when using No. 5 and



Model CB packaged boiler (Cleaver-Brooks Co.)

No. 6 fuel oils. The burner is said to have many advantages found previously only on steam atomizing burners used in central station plants. There are no high speed moving parts. The air atomizing burner has a diffuser and nozzle which are stationary. Through a single air solenoid valve, oil lines are purged after each burner operation. Freedom from maintenance and clean burning operation using fuels from No. 2 through No. 6 fuel oil have been demonstrated, according to Cleaver-Brooks.

Davited front and rear door and hinged inner doors simplify routine inspection. A single blower on the boiler runs both the burner and compressor.

The new boilers incorporate forced draft, 4-pass construction that assures 80% efficiency from 30 to 100% of full rating and shows quick response to fluctuating loads. They are fully fiber glass insulated, fully automatic and meet Underwriters' Laboratories requirements on the complete boiler package.

Cleaver-Brooks produces packaged boilers in 19 sizes, 140 models, 15 to 600 h.p. for heating and processing applications. Other products include hot oil heaters, mobile steamers and distillation equipment.

(Request Item No. B-10)

#### Plastic Resin



Amazite can be applied right over new or old flooring (The Hallemite Mfg. Co.)

Amazite, a pure plastic resin recently announced by Hallemite Mfg. Co., may be applied right over new or old concrete, terrazzo, brick, stone, marble, slate, plaster, metal or wood, according to the company, to provide both complete protection against destructive acids and caustics, as well as rugged resistance to abrasion. Thick applications may be trowelled on to transform rough, pitted floors into smooth traffic areas, and surfaces in good condition may be protected and preserved by brushing on the treatment like a paint, according to Hallemite. Amazite hardens overnight into a dense, dustless, leather-tough film that is

reported not to chip even when "feathered."
Under heavy traffic, ½8" of Amazite outwears 2" of concrete Hallemite says. Depending upon his own choice, the user can produce a finish either as glossy as a china plate or completely skidproof—even if wet, greasy or soapy. Three formulations—for trowel, paint brush or spray gun application—are available in Clear (Amber), Tile Red and Cement Gray colors.

(Request Item No. B-11)

#### Milling Green

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Brilliant Alizarine Milling Green 2GL p. a. f. has been added to the line of Sandoz Brilliant Alizarine Milling colors. The color is said to be suitable for shading the neutral dyeing premetallized Lanasyn colors as well as the chrome dyes. In the latter application, it is unaffected by chrome, Sandoz reports. Wet fastness and fastness to fulling and chlorination are extremely good for a bright turquoise. Fastness to light is said to be very good on wool, nylon or silk, a feature particularly desirable for print work. (Request Item No. B-12)

#### Spinning Ring



Herr conical ring (Herr Mfg. Co.)

A ring for spinning and twisting 6 oz. wool and Dacron blends has been announced by Herr Mfg. Co. Inc. This 5/16" face Herr conical ring has proven to be a popular aid in the production of these light count yarns at high spindle speeds, according to the company. The single oil reservoir supplies lubrication to all bearing surfaces of the ring. Travelers are light and rigid to balance the light outward thrust of the yarn and prevent yarn breakage. The rings fit all standard machines.

(Request Item No. B-13)

#### **Finishing Process**

According to officials of the Fas-Dri Corp., a revolutionary new process for finishing fabrics of cellulosic fibers, which has been in the development stage for several years, is now ready for commercial application. This new process promises to impart to rayons and cottons important commercial qualities of wash-and-wear, wrinkle resistance, minimum ironing, spot and stain resistance, higher tensile and abrasive strengths, and quick-drying ability that rate with the more expensive synthetics.

According to the company, laboratory tests show that fabrics finished by the Fas-Dri process have vastly superior durability, longevity, and most important, the "hand"



### to "Coordinated Production"

Any required Quality Yarn at High Production Rates can be a Known Quantity for you when you run a sample lot of your own standard roping on the most up-to-date Davis & Furber Woolen Ring Spinning Frame — under the supervision of D&F "Coordinated Production" Spinning Technicians.

You are invited to try such a D&F Demonstration, complete with all the most modern technical developments. This can be made available to you either at North Andover or Charlotte. In fact, it can even be arranged on your own D&F Frame in your own mill.

Your stock may be wool, rayon fibre, or nylon. Or it may be a blend of any or all of these fibres plus cotton waste, asbestos, hair blends, or any of the many known synthetics.

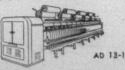
Prepare samples of your own roping. Then, let us show you how the Davis & Furber Spinning Frame can bring you the profitable advantages of "Coordinated Production" through greater volume and better quality. Get in touch with — Davis & Furber at North Andover or Charlotte, Do it now.

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CARDS . SPINNING FRAMES . PREPARATORY MACHINERY . WARP DRESSING MACHINERY . FINISHING MACHINERY MACHINERY MODERNIZATION . ACCESSORIES, SUPPLIES, CARD & NAPPER CLOTHING, GARNET WIRE, TAPES & APRONS SPARE PARTS . TECHNICAL SERVICE & CONSULTATION

#### FOR THE TEXTILE INDUSTRY'S USE-

can be controlled in a wide range from soft drapability to more stiff finishes. By varying the treatment, fabrics can be made hand washable or machine launderable. Tests show that the new finish acts as a deterrent to silverfish destruction.

(Request Item No. B-14)

#### Locking Device

A new eccentric type locking device for use on winder spindles of all types, straight blade as well as the arbor type, has been developed by the Louis P. Baston Co. The locking device is also said to have applications throughout the textile industry including wind-up shafts on inspection tables, slitting machines, and others. The locking spindle is described by the company as 'trouble free" since it has no blades to weaken or break, no clutch to wear out or slit and no springs to weaken or break. Installation of the device is said to require only a few minutes. Doffing is said to be simplified by use of the lock since no tool is required to lock the yarn carrier in position. It is also reported to be completely safe in operation.

(Request Item No. B-15)

#### Anionic Finishing Agent

Lauramine 314-A, anionic finishing agent for aftertreating of cotton knitting yarns, is now being offered by Laurel Soap Mfg. Co. Inc. A white, medium-viscosity paste, Lauramine 314-A is said to be fully resistant to the adverse effect of ageing, and will not turn rancid.

The finishing agent is best used alone

as a self-finish. It is also compatible, however, with other finishing materials—except, of course, for cationics—and may safely be used in combination. It cannot alter even the most delicate shades of dyed goods, and whites stay white, Laurel points out.

Lauramine 314-A is highly stable in neutral and mildly alkaline solutions, though acid combinations should be avoided. It is excellent for finishing dye lots where high concentrations of salt fixatives are required, as it shows stability in up to 1% sodium chloride solutions.

The finishing agent is said to be easy to prepare and simple to use, and to give the kind of quality finish typical of the better yarns. A free sample is available.

(Request Item No. B-16)

#### **Flowmeters**

The Fischer & Porter Co. is now offering its new 2700 Series variable-area Flowmeters which feature packing-less, snap-in metering tubes. By using O-rings to seal the tube ends to the metal fittings—nuts, bolts, stuffing boxes, packing glands and all adjustments have been eliminated. Piping strains cannot be transmitted to the glass metering tube since the tube "floats" in the O-rings. Side frames and front and rear covers are also of snap-in construction.

The new design is said to permit coverage of flow ranges from a fraction of a cc./min. to 40 gal./min. with only 3 meter sizes. Formerly 8 sizes were required. Inventory costs can therefore be reduced 50 to 75%. Metering tubes can be "snappedin" without the use of any tools and without disconnecting or disassembling the meter. Cleaning and range changing are reduced to simple, quick routines. All dimensions conform to standards of I.S.A. Rec-

ommended Practices (P. R. 16.1—tentative).

In addition to these unique advantages the 2700 Series meter retains all of the features of its predecessor, the 1700 Series, including: predictable calibration performance, 360° rotatable end fittings, stainless steel enclosures with safety vents, safety glass windows, wide variety of corrosion resistant materials, full line of accessories and secondary instrumentation, and stock shipment schedule.

(Request Item No. B-17)

#### Pusher Attachments



A new pusher attachment for electric fork trucks (The Elwell-Parker Electric Co.)

A new pusher attachment, specifically designed for use on its 2,000-lb. and 3,000-lb. capacity Cargo Scout electric fork trucks, has just been announced by The Elwell-Parker Electric Co. The new combination provides users with the unique benefits of palletless handling, plus the speed and maneuverability of the basic chassis, according to Elwell-Parker.

The pusher attachment provides a convenient means for mechanically unloading packaged or bagged material from take-itor-leave-it pallets, or directly from the truck's forks. In shipping operations, for example, where it is desirable to retain the pallets, the attachment is said to eliminate the manual operation of transferring material from the pallets. With the pusher, material which is to remain in storage for indefinite periods need not tie up pallets for these extended periods; also less total storage space is required. The basic truck has been engineered for work where aisles or operating areas are congested. In addition, the truck, because it features endcontrol, stand-up operation, is said to allow operators to mount or dismount with minimum time and effort.

(Request Item No. B-18)

#### Vinyl Copolymers

Full-scale production of a new vinylacrylic copolymer emulsion for applications in the textile field has been announced by National Starch Products Inc. The new emulsion, Resyn 2203, is composed of extremely fine and uniform particles assuring greater surface coverage and stronger bonding properties. The resin film combines excellent clarity with high oil and water resistance.

Expected to solve many of the sizing problems encountered by finishers in the textile industry, Resyn 2203 imparts flexi-



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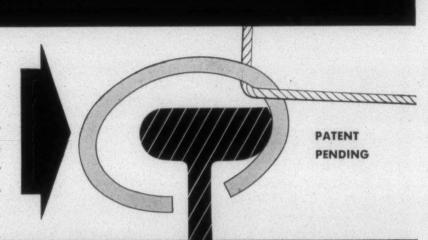


DIAMOND FINISH

### ANTI-WEDGE"RING

THE FIRST MAJOR CHANGE
OF THE CENTURY IN FLANGE DESIGN

- . TOP IS FLAT.
- WEB IS OFFSET.
- INNER FLANGE IS CON-TOURED TO TRAVELER, PROVIDING NEW CON-CEPT OF BEARING AREA.



#### Permits MAXIMUM advantage from elliptical travelers

This new concept separates the yarn room area from the traveler bearing area. The design of the yarn room area prevents wedging or trapping of the yarn at high speeds. The traveler bearing area provides the low-gravity elliptical traveler with a long bearing contact, lower pressure per square inch, hence greater heat dissipation. The offset web prevents traveler horns from touching.

**Results:** Yarn runs freer at high speeds. Travelers run cooler at high speeds, in accurately controlled orbit.

**Thereby:** For the first time permits Elliptical Travelers to be used to MAXIMUM advantage.

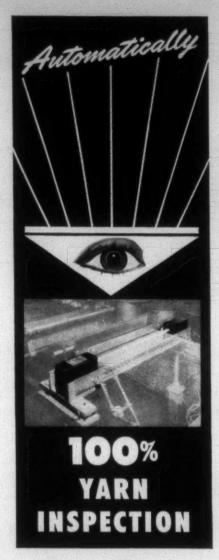
SEND SAMPLE OR SPECIFICATIONS FOR QUOTATION



WORLD'S LARGEST MAKERS OF RINGS EXCLUSIVELY



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#### ...with the Lindly Automatic Yarn Inspector

Take all the guesswork out of yarn inspection with the new standard of yarn quality — THE LINDLY COUNT.

The Lindly Automatic Yarn Inspector counts every fault...provides a stop motion, set to your tolerances. You determine quality, measure it in terms of THE LINDLY COUNT.

Lindly Automatics pay for themselves in a short time, go on adding to your profits for years.

Inquire about the family of Lindly Automatics, built to cut your costs, boost your quality.



#### FOR THE TEXTILE INDUSTRY'S USE-

ble finishes and will maintain the glossy or lustrous characteristics of the material to which it is applied. It is based on a special vinyl copolymer emulsion, is internally plasticized and virtually odor-free.

(Request Item No. B-19)

#### Direct Blue Green

Said to be suitable for coloring the newer synthetic fibers, Artisil Direct Blue Green 3G is the latest dyestuff released by Sandoz Inc. It is reported to offer an improvement in brightness of shade, compared to the best previous bluish green in a disperse dye. This homogeneous dyestuff is the closest to a true green shade yet to appear in this class, according to Sandoz, and fastness to sunlight is extremely good on acetate and nylon. Stable to heat, Artisil Direct Blue Green 3G is recommended by the company for nylons and triacetates which will be heat treated. (Request Item No. B-20)

#### Automatic Dockboard

A new automatic dockboard which can be installed to existing truck docks without expensive alterations has been announced by the Kelley Co. Inc. The new 1200 model automatic dockboard is simply bolted to the top of the dock, Kelley reports. A counterweighting system is mounted on the face of the dock between two bumpers. No electrical, air or hydraulic power is required. The backing truck automatically lowers the ramp to working position. After loading operations are completed, the ramp automatically returns to its original position, ready to service the next carrier. No dock attendant is needed. The entire adjustable ramp section tilts automatically to compensate for uneven truck beds. When installed under an overhead door, the bottom of the door is notched or equipped with closure strips. Standard models are 6' wide and 8' and 10' long with roll-over capacity of 12,000 lbs.

(Request Item No. B-21)

#### Cuprofix Navy, Direct Dye

Lumicrease/Cuprofix Navy GLA, p.a.f., recently added to the Sandoz Inc. Lumicrease line of very fast to light direct dyes, is being recommended for use on decorative and automotive fabrics. Fastness to light, water and perspiration are more than sufficient to meet the most severe requirements for these applications, according to the company. Cuprofix, Sandofix or U. F. resint reatments cause no loss in the favorable ratings of the dye.

(Request Item No. B-22)

#### **Pyramided Ladders**

The new pyramid design has been added to Ballymore's 8 to 12-step Hi-boy ladders. This additional safety factor provides greater stability which increases the feeling of security for those using the ladder. It en-



All-steel Hi-boy ladder (Ballymore Co.)

courages better, quicker work at heights up to 15 ft. and has resulted in immediate savings in time and efficiency, the company reports.

All-steel welded construction assures superior, long-lasting strength. All models are equipped with handrails and with four 4"-diameter casters for fingertip mobility. Front casters swivel, back ones are rigid . . . patented foot-operated Ballylock provides means to permit rubber-tipped legs to get a firm, safe 4-point secure grip on the floor.

Widths at bottom are 30", tapering to 25½" at top step. Treads of expanded metal, serrated anti-skid grating or ribbed rubber are available.

(Request Item No. B-23)

#### Elastic Web Loom

A new high speed elastic web loom, carrying 36 spaces of 11/4" elastic, is now being produced by The Fletcher Works. The new loom can run at 200 picks, as against 150 picks for other narrow fabrics weaving looms, providing an increase in production of 30% with considerably less breakdown and maintenance, Fletcher reports.

The loom, built on Fletcher standard 9' Multi Fab frame, features both the section beam type of letoff and the individual space beam type letoff, whichever is required. Start, stop and jog buttons are mounted on the front arch rail to be within easy reach of the operator. This control contains signal lights showing the section of the loom in a warp end, which might be broken, thus saving time. There is also a light designating the time for filling change, at which point the weaver changes all quills at one time.

A stop button at the rear of the loom gives further protection to the operators in

#### PUT MORE SLIVER IN THE CAN

# WITH NEW SACO-LOWELL "BIG" COILERS

FOR DRAWING

OBTAIN LONGER CONTIN-UOUS RUNNING TIME.

CUT YOUR LABOR COSTS AS MUCH AS 30%.

REDUCE DOFFING AND CREELING COSTS.





Saco-Lowell has taken another major step toward improving mill profits by expanding even further, our "large package idea". For drawing, we now offer as a CONVERSION up to 16" DIAMETER COILERS ON 18" GAUGE FRAMES and up to 15" COILERS ON 16" GAUGE FRAMES in both 36" and 42" can heights.

These "Big Coilers" feature the patented COMPOSITE TUBE GEAR DESIGN which prevents snagging of fibers or "tagging"; an overcenter lay which produces a more uniform coil pattern and puts maximum amount of stock in can; and virtual elimination of reworkable drawing sliver waste. In addition, they operate smoothly and cleanly at high speeds, require minimum maintenance and lubrication, maintain highest quality sliver.

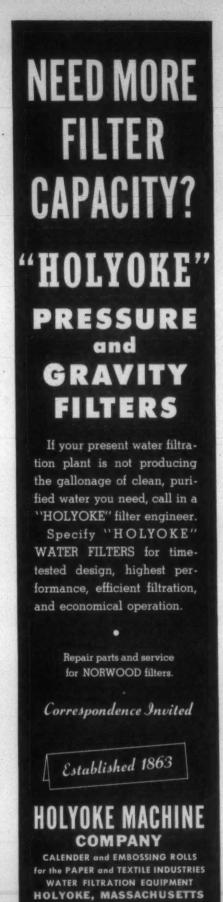
Put your mill on a low-cost, higher profit basis with new improved Saco-Lowell machinery — discuss your problems with the nearest Saco-Lowell Sales Office.



### SACO-LOWELL SHOPS

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD & SACO, MAINE; SANFORD, N.C.; EASLEY, S.C. Soles Offices: CHARLOTTE . GREENSBORO . GREENVILLE . ATLANTA



#### FOR THE TEXTILE INDUSTRY'S USE-

the rear aisle inspecting the elastic web fabric. Another feature is a batten positioning device, controlling the exact position of the shuttle when the loom is halted. A highly serviceable rubber beam is used in the elastic web loom, Fletcher points out.

(Request Item No. B-24)

#### **PVAc Emulsions**

A complete line of polyvinyl acetate homopolymer emulsions for the textile industry is being placed on the market by Reichhold Chemicals Inc. R.C.I. discloses that among the qualities it can modify by process changes are particle size and water resistance. Controlled variation of particle size and certain other qualities enables PVAc emulsions to impart a specific hand to textiles.

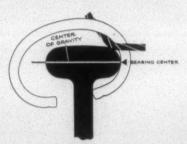
The textile industry uses PVAc on cellulosic fabrics, like cotton and rayon, wherever the hand needs building-for example, to stiffen inner linings of men's and wom-(Request Item No. B-25)

#### Spinning Ring

The new Anti-Wedge spinning ring announced by Whitinsville Spinning Ring Co. features a new flange designed to permit trouble-free running of elliptical travelers at maximum speeds. On this ring, the flange is flattened at the top, and the inner radius is contoured to the curve of the traveler. In addition, the web is offset toward the outside of the flange rather than centered. The "bearing center" of the traveler on

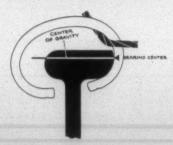
the flange is higher than on a conventional

#### CONVENTIONAL RING



As speed increases, centrifugal force causes traveler to dip and wedge yarn at "hinge."

#### "ANTI-WEDGE" RING

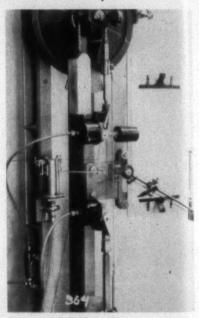


At maximum speeds, traveler will not dip, cannot wedge varn.

ring. When increased centrifugal force is exerted, the traveler on the Anti-Wed; ring floats in a controlled orbit without wedging or trapping the yarn, or touching the ring web. Increased traveler life is claimed because: (1) the contoured flange provides greatly increased area of cont between traveler and flange, resulting much lower pressure per square inch a vastly increased heat dissipation; and ( offset web location stops any contact traveler horn with web, preventing trave a burning as well as uneven ring wear.

(Request Item No. B-2/)

#### Tire Cord Clamps



Scott vertical X-13 tensile tester equipped with semi-automatic Spruance tire cord clamps (Scott Testers Inc.)

Scott Testers Inc. has announced that its Spruance semi-automatic tire cord clamps are now available on the vertical X-3 Tensile Tester. Originally provided only on the Scott IP-4 horizontal tester. the clamps mechanize the critical steps of the test procedure, assuring positive unformity through: automatic adjustment of clamps which compensates for varying cord diameters and assures uniform pressure with no crushing, slippage or disturbance of tow twist; automatic pre-tensioning; au tomatic test loading cycle; and automati clearance of broken ends.

(Request Item No. B-27

#### Quality Control Instrument

A quality control instrument which meaures and records diameter deviations i lengths of such materials as thread, mone filament, etc., has been announced by Indu trial Gauges Corp. The electronic instru ment inspects any convenient length of m terial ranging from approximately 0.001 0.1' in diameter. It was designed primaril for production inspection applications an may be mounted on a portable table or in fixed location.

Sample lengths of material are take

directly from the production line and run through the instrument's gagehead. The operator adjusts production equipment immediately when diameter deviations fall outside allowable limits.

In operation, a pair of motorized rubber pinch rolls draw the material through a field of light produced within the gagehead. Phototubes detect variations in the shadow size of the material and these variations are amplified and translated for the recorder X by electronic circuits within a measuring

console.

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The gage is set for inspection by adjusting a micrometer spindle to the nominal diameter of the material. This enlarges an aperture so that the amount of light which passes over and under the material is equal to the amount of light which passes through a second fixed aperture. When the diameter is correct, the same amount of light will pass through each aperture, and measuring and reference phototubes will be energized equally. When diameter deviations cause the

measuring phototube to receive more or less light than the reference phototube, the circuit becomes unbalanced and electronic circuits within the measuring console activate the recorder which records the diameter deviations on the chart.

The gagehead contains the light source, lens system, diameter-setting mechanism, phototube zero-setting control, ceramic pulleys which guide the material through the light beam, measuring and reference phototubes, and a preamplifier.

Included in the measuring console is a power supply as well as amplification and translation circuitry. A power switch and on-off signal light are mounted on the front of the cabinet. The pinch roll and recorder on-off switch is located on the table top as is the pinch-roll speed control. The pinch-roll drive is mounted under the table top.

The strip chart recorder is of the galvanometric type, although a potentiometric type may be supplied if desired.

(Request Item No. B-28)

blends, information on Carbowax polyethylene glycol 20M, and solubilities of pharmaceuticals in Carbowax polyethylene glycol

Following a general description of the materials, there is a table of physical properties including solubilities in common solvents and compatibilities with common ingredients of formulated products. Shipping data are condensed in a full-page table.

A 16-page section describes in detail the applications of all Carbowax polyethylene glycols in many industries including textiles. (Request Item No. B-33)

#### Weaving Machines

A 4-page folder, "Textile Job Report No. 20," describing Warner & Swasey Co.'s Sulzer weaving machines, has been issued by the company. The booklet outlines the use of Warner & Swasey machines by the Yale (Mich.) Woolen Mills, manufacturer of woolen fabrics and upholstery material.

(Request Item No. B-34)

#### Lubricant For Synthetics

A new, 2-color, 12-page folder illustrating and describing Fibregard, a colloidal lubricant that adheres uniformly and continuously to the smooth, glassy surfaces of man-made fibers, has recently been published by Harry Miller Corp. The lubricant is said to increase loom efficiency, increase the tensile strength of fibers, eliminate static and ball-up or gumming during carding. reduce breakage of treated yarns and insure slick warps. Fibregard is described as a smooth, viscous, flowable white cream instantly soluble in plain water to produce thin bodied stable emulsions. A saponifiable colloid in the lubricant is said to contribute unusual properties of adhesion to surfaces that normally repel moisture and oily lubricants and to reduce tension because it provides adequate surface lubrication. The product does not discolor white goods, change the shade of dyed goods and it scours out completely, according to Miller Corp. A section of the folder describes the application of Fibregard as a stock lubricant, applied at the blending machine or picker for synthetics or blends of synthetics with wool or cotton; as a warp sizer, softener, binder and lubricant on formulas involving synthetics; as a cone winding lubricant in an emulsion winder to provide added lubricity to fibers requiring additional lubrication to prevent fuzziness of the yarn and needle burn. Photos show the application of Fibregard on a picker, a blender and a slasher, and case histories describe the many benefits users have obtained with (Request Item No. B-35)

#### Variable-Speed Drive

A 4-page, 2-color letterhead-size bulletin has been published describing operation and applications of the new Fincor, variable speed drive package, which has no tubes, no brushes, no commutator. Speed is controlled by input voltage, which is varied by magnetic amplifier, in turn controlled by

#### For the Mill Bookshelf

#### Wood Tanks

A reference source said to be the most complete and up-to-date ever produced on wood tanks has been published by the National Wood Tank Institute. Called the "Wood Tank Reference and Data Handbook," the volume includes such subjects as: the uses of wood tanks; capacities; physical and chemical properties of wood and their relation to expected service of wood tanks, etc. This manual projects the use of wood to cover the most severe conditions found in chemical processing by the use of selected polymer lining.

(Request Item No. B-29)

#### Distribution Equipment

Low-voltage distribution equipment and components are the subject of a new 144-page general catalog, issued jointly by the circuit protective devices and distribution assemblies departments of the General Electric Co. The new catalog provides condensed information on all products of the two departments — safety switches, disconnect switches, open-knife switches, circuit breakers, service entrance equipment, lighting and distribution panelboards, wireway, switchboards, motor control centers, sectional-type distribution center unit substations and busway.

(Request Item No. B-30)

#### Floor Surfacing

Test data indicating that Monile, a new monolithic floor surfacing material, has a tenacity and bonding strength 40 times greater than concrete, is included in an 8-page illustrated booklet issued by The Master Mechanics Co. Typical installations in critical plant areas and out-of-doors are

illustrated to show how the surfacing stands up under heavy truck traffic, destructive process solutions and temperature changes. It presents the results of research tests, based on ½" applications of Monile, which indicate a flexural strength 12 times greater than that of concrete and water and freezethaw resistance 10 times greater than concrete. Methods for application over concrete, wood, mastic and other surfaces are described. (Request Item No. B-31)

#### **Industrial Trucks**

A check-list of problems that may arise with the hydraulic systems of industrial trucks and their solutions is being offered by Elwell-Parker Electric Co. It is designed for maintenance personnel to guide them in the correction of problems. Copies are available free of charge.

(Request Item No. B-32)

#### Carbowax Polyethylene Glycols

A new 54-page booklet on the properties, applications, storage, specifications and testing of Carbowax polyethylene glycols has been published by Union Carbide Chemicals Co., a division of the Union Carbide Corp. Carbowax polyethylene glycols are water-soluble, non-volatile, unctuous liquids and solids from which softeners, lubricants, antistatic agents and conditioning agents for textile fibers are prepared.

Because of the wax-like nature of the solid compounds, they also function as knitting sizes. Polyethylene glycols are reported to be excellent dyestuff solvents.

The new publication brings up to date previously printed information on these compounds and contains new data for potential users, including physiological properties, viscosities of polyethylene glycol a signal current from an a.c. tachometer built into the motor. The product is said to combine advantages of a.c. and d.c. drives and to require no lubrication nor other maintenance. (Request Item No. B-36)

#### **Textile Standards**

The 1957 supplements to the 1955 Book of Standards of the American Society for Testing Materials have been announced by the society. Part 7, dealing with textiles, will be published in March of this year. The 280-page supplement contains 40 standards covering textile materials (terms and definitions, quantitative analysis, wool carpets, cordage, fibers, yarns and fabrics). The book of standards is published triennially with supplements in the intervening years. (Request Item No. B-37)

### Story Of Cotton

The story of cotton from the earliest historical references in ancient literature is the subject of "Brush Talks," house organ of M. W. Jenkins' Sons Inc. The production of cotton in the new world is presented and the gradual mechanization of the industry is traced. Specific reference is made to the use of the company's brushes in brushing machines for the removal of trash from cotton. Jenkins manufactures Metalkor cylinder brushes and Lifewood wood-backed brushes. The brushes are available in fiber, hog bristle, nylon, etc.

(Request Item No. B-38)

#### Lift Trucks

A cutaway brochure describing the Yale Worksaver line of rider-walkie trucks has been published by Yale Mfg. Co., materials handling division. Using sectionalized views and a system of unique die-cut pages, the booklet pictorially disassembles the Worksaver to point out all its operating features. Yale Worksavers are produced in pallet, platform, stacker and tractor models.

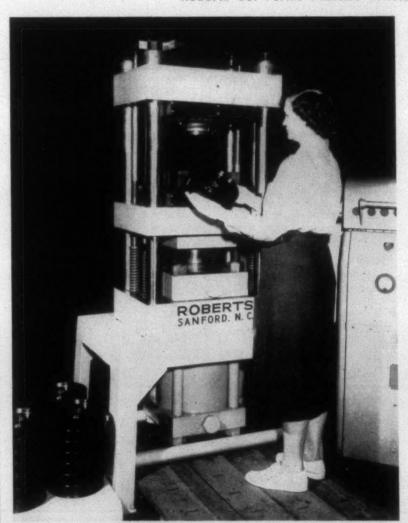
(Request Item No. B-39)

#### Non-Substantive Naphthol

A booklet describing the properties of Naphthol AS-BN has been issued by General Dyestuff Co., sales division of General Aniline & Film Co. Naphthol AS-BN is a new straight, nonsubstantive naphthol offered for the continuous naphtholation of cotton and rayon piece goods in the dyeing of economical fast-to-light browns by coupling with suitable Fast Color Salts or diazotized Fast Color Bases. It is also suggested for shading other naphthol in padding where a brown component is required.

(Request Item No. B-40)

## Roberts Co. Forms Plastics Division



ROBERTS CO.'S NEW PLASTICS DIVISION, just put into operation, features this 150-ton molding press which was designed and built by the company in its Sanford, N. C., machine shops. The operator is molding sisal-filled phenolic resin into nine-inch tape drive pulleys for Roberts' M-1 all ball bearing spinning frames. The new plastic pulley is held to a steel shaft by a new Roberts' patented clamping arrangement which eliminates the need for set screws. A number of other important parts are already being molded for Roberts spinning frames.

Roberts Co., manufacturer of textile spinning machinery, Sanford, N. C., now has in operation a complete plastics division to produce a number of important machinery parts.

In explaining the expansion into plastics, Robert E. Pomeranz, president of the company, said: "As manufacturers seeking the maximum efficiency in the performance of our machinery, we have found that plastics are more adaptable to certain spinning frame parts than metal, by virtue of performance and cost. By making our own plastic parts we are insured of superior quality and control, closer inventory control, and lowered costs."

James M. Stewart heads the new plastics division as managing engineer. He was formerly president of Dolphin Molding Co., Norfolk, Va., and moved to Roberts when the machinery maker purchased that firm's production facilities in 1957. Additional equipment has since been added to fully equip the new division.

The newly established division will serve not only for production, but also for research and development of the adaptability of various plastics to textile machinery. Compression and injection molding of phenolics, melamine, nylon and other impact-resistant types is being conducted. In addition, the company now designs and builds its own molding presses.

The new division is already in production on the following plastic parts for Roberts' spinning frames: (1) retainer rings and seals for ball bearings; (2) roving guides; (3) nine-inch sisalfilled phenolic resin tape drive pulleys with a patented clamping arrangement; (4) high-speed ball bearing spindle brakes of wear-resistant, asbestos-filled phenolic resin; (5) suction cleaning flute caps; and (6) saddle devices for the Roberts ball bearing top roll suspension drafting system.

#### amp Motors

Reliance totally protected pump motors, from ½8 to 1,000 h.p., are discussed in the ew 4-page, 2-color bulletin, B-2507. Photos and easy-to-read copy explain the features of the pump motors, which are designed and manufactured for every pump in all ypes of industries, wherever a prime mover of fluids is required. The bulletin explains he Reliance Partial Motor concept for ataching the machined motor frame directly to a pump frame to form an integrated anit. (Request Item No. B-41)

#### Tensioning Tool

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An 8-page booklet describing its new B5 stretcher has been issued by Acme Steel Co. The booklet gives complete specifications of the tool and illustrates its versatility. According to the company, the B5 can be used on almost any steel strapping application. It was designed to meet the need for a continuous take-up, manually-operated tensioning tool that can be used in any position in almost any application, whether light or heavy, large or small.

(Request Item No. B-42)

#### Hand Trucks

A new booklet with over 30 2-color photographs of Fairbanks steel-framed 2-wheel and platform hand trucks, has been published by The Fairbanks Co. The 6-page brochure provides construction features, applications and basic specifications of

each of Fairbanks' 5 types of Commander steel-framed platform trucks and 15 types of Series 9000 steel-framed, 2-wheel hand trucks. In addition to the steel-framed trucks, the publication illustrates Fairbanks' standard line of Lift-Jack platform trucks, all-wood platform trucks, dollies and all-steel, 2-wheel hand trucks.

(Request Item No. B-43)

#### Fork Truck

A new 4-page folder, illustrating and describing its Model F-38T3; 3,000-lb. capacity, electric-powered fork truck, has just been published by the Elwell-Parker Electric Co. The folder includes nearly a dozen illustrations of the truck, which is designed for fast operation, particularly where congested working areas or limited headroom are factors. Detailed specifications of the model, plus design and application information are likewise included.

(Request Item No. B-44)

#### **Textile Chemicals**

"Chemicals for the Textile Industry," a 28-page booklet summarizing textile applications for organic chemicals, has been published by Union Carbide Chemicals Co., division of Union Carbide Corp.

A feature of the new booklet is a section detailing major uses of Carbide's chemicals in the textile industry. It also contains an index of all textile applications of Carbide's products and 8 pages of charts and conversion tables useful in textile research and

production calculations. Extensive literature references are given for all applications, and there is a bibliography of booklets and bulletins helpful in development work.

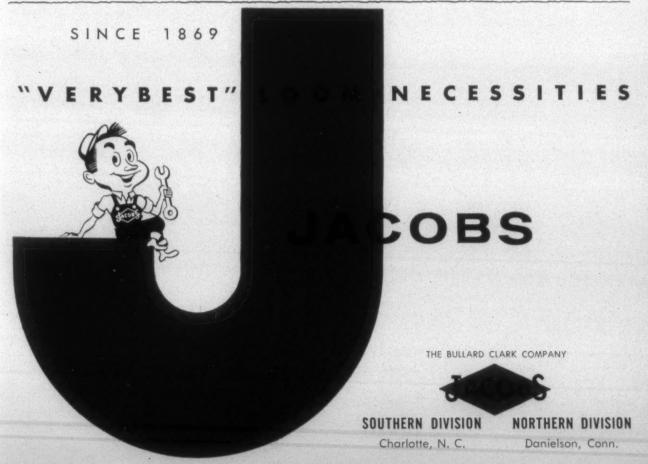
(Request Item No. B-45)

#### **Industrial Safety**

The National Safety Council has published two new pamphlets on industrial safety and housekeeping. "We Know Better," a multicolor pamphlet, points out that most workers know their jobs, have experience, and don't want to hurt others or themselves. Often, however, they disregard good sense. The other pamphlet, "Your Future. . Keep It Clean," concentrates on housekeeping in the plant, noting that good housekeeping makes work easier, smoother, quicker—and safer. Single copies of the pamphlets are available free on request from the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

#### Color Index

The American Association of Textile Chemists & Colorists expects to receive early March delivery on Volume 3, second edition, of the "Color Index" from the British Society of Dyers and Colourists. According to the association, a U. S. Customs ruling has limited the availability of the voluminous compilation. Present price of the volume is \$112 delivered. Orders, with check to cover, should be sent to A.A.T.C.C. National Headquarters, Box 28 Lowell, Mass.



# Serving The Textile Industry

## A. E. Staley Co. Elected Member Of Research Group

The A. E. Staley Mfg. Co. has been elected to membership in The Industrial Research Institute, nationwide research organization. Dr. Thomas L. Gresham has been appointed to serve as the company's representatives to the institute. He is in charge of Staley's research program as a vice-president and technical director of the company. Alternate representative will be Dr. James A. Bralley, director of chemical research. The institute was organized under the auspices of the National Research Council. Membership is restricted by invitation to companies with high caliber research organizations.

## Mt. Hope Machinery Enlarging Home Plant

Mount Hope Machinery Co., Taunton, Mass., is enlarging the floor space of its home plant here. New construction will increase shipping facilities, house an enlarged engineering department and provide additional general office space. The company manufactures a complete line of cloth handling equipment.

## Keever Starch Co. Adds Textile Lab, Relocates

The Keever Starch Co. has announced the removal of their Greenville, S. C., salesservice offices from the S. C. National Bank Building and the opening of their textile laboratories. Sales offices and laboratories are now located in the company's new building at 118 S. Pleasantburg Drive.

## National Aniline Produces New Nylon Carpet Staple

Allied Chemical and Dye Corp. is now in commercial production on 15-denier Caprolan staple at National Aniline division's modern textile fiber plant at Chesterfield, Va., and is establishing itself as a new source of nylon carpet staple. Caprolan staple has been under development for a considerable period of time, National Aniline said, and, in recent months, has been subjected to severe utilization tests in the mills of principal yarn spinners, tufters and weavers. It was only after the successful completion of these tests that the decision was made to produce the new carpet fiber on a commercial basis, the company said. Caprolan staple is available in lengths suitable for all spinning systems. Crimp levels, luster and heat-setting properties have been carefully engineered for carpet use, In addition to all of the performance values normally expected of nylon, Caprolan staple is said to also offer the distinct advantages of lasting whiteness, excellent affinity for virtually every class of dyestuffs-even di-

rects, exceptional penetration and level dyeing properties, excellent resilience and unsurpassed abrasion resistance.

## American Viscose Sees Decline In Sales And Earnings In 1957

Net income for the year for American Viscose Corp. was \$8,408,000 or \$1.65 a share as compared with \$14,909,000 or \$2.93 a share in 1956. The company attributed the loss to unsatisfactory rates of operations, higher costs of doing business and lower prices for some of its products. Net sales for the year were \$227,610,000 against the 1956 total of \$239,399,000.

American Viscose's equity in its 50% owned companies, The Chemstrand Corp. and Ketchikan Pulp Co., increased substantially to \$2.08 in 1957 from \$1.29 in 1956 for each share of American Viscose stock. This increase was attributed to the expanding operations of these companies and higher sales—\$168.7 million in 1957 compared with \$128.6 million in 1956.

## Dixon Corp. Reports Several Recent Orders

The Dixon Corp., Bristol, R. I., reports that recent orders have included work on Roth, Duo-Roth, Casablancas and Z type drafting systems. The company said Laurens (S. C.) Mills has contracted to change 31 frames from Z-2 spinning to Duo-Roth. This work entails renewal of most major parts from the roller beam up. Clifton (S. C.) Mfg. Co. and Ponemah Mills in Taftville, Conn., are modernizing some of their spinning with elimination of cap bars and oiling and reduction in cleaning schedules. Crompton-Highland Mills, Griffin, Ga., is changing 30 frames from Roth to Duo-Roth Dixon saddle guide changeovers. Dixon Corp. reports that demand for their saddle guide changeovers continues strong, citing a possible pay-back in 24 months as one of the reasons.

## Colton Chemical Expands Production Facilities

Expansion of production facilities in the Elkton, Md., plant of Colton Chemical Co., a division of Air Reduction Co. Inc., Cleveland, Ohio, are nearing completion. The stepped-up facilities will make possible the increased production of Vinac emulsions widely employed in the textile industry.

## Consumer Products Division Set Up By Dexter Chemical

In a move toward diversification, Dexter Chemical Corp., New York City, has esestablished a consumer products division with national and foreign sales representation. The company reports that in the process of diversifying it has studied only fields where it could apply its experience in textile chemicals. One of the new consumer products the company has developed is an antistatic detergent for cleaning phonograph records.

## Trumeter Is U. S. Agent For Moisture Control Unit

Trumeter Co., New York City, has been appointed U. S. agent for Drytester G.M. B.H., Lungern, Switzerland, manufacturs of the U.S. patented Humidocontrol-Drytester equipment for moisture control in textiles. The unit takes advantage of the fact that during the drying of textile materials, whether in the form of single threads, slivers, or in the form of warps and fabrics, an electrostatic charge is formed which is greater for dry materials and smaller for moist materials. Because of this measuring principle, according to the company, it is possible to control the lightest as well as the heaviest qualities of the most varied textile goods, over the whole width of the goods, of whatever origin, without any calibration and without any special adjustment. Variations in sizing and finishing mediums are said to have no effect on the precision of the device.

## Stellamcor Named U. S. Agent For Italian Textile Machines

Stellamcor Inc., New York City, is sole agent in this country for two Italian textile equipment firms. They are Industria Lavorazioni Metalli Antiacidi, manufacturer of various types of dyeing equipment; and Oreste Rolando, manufacturer of wool openers, rag tearers, rag beaters, thread extractors, willows and carding willows for opening and mixing textile fibers.

## Reymet To Be Main Trademark For Reynolds Metallic Yarns

Metallic yarns produced by Reynolds Metals Co. will be identified in the future primarily by the registered trademark Reymet. The trademark Reynolds Aluminum Yarns will be used less extensively for these products in the future. The company produces aluminum yarns in both filament and staple forms. They are used by weaving firms and knitters in making a variety of fabrics.

## Southern States Equipment Begins Expansion Program

The quarter of a million dollar expansion program recently undertaken by Southern States Equipment Corp., Hampton, Ga., manufacturer of a line of coilers, conversions, card drives; comb boxes and other textile equipment, is expected to be completed by June.

Included in the new facilities for the

Hampton plant will be a modern steel and masonry structure of approximately 25,000 square feet. It will join the structure completed in 1953 and will provide assembly and manufacturing space.

Also included in the expansion program is enlargement of office and cafeteria space, a larger and more convenient parking area and a new rail and truck entrance.

## Hilton-Davis Co. To Build Greenville, S. C., Office

Construction of a new building in Greenville, S. C., as regional technical sales and distribution headquarters of The Hilton-Davis Chemical Co., Cincinnati, Ohio, to serve textile mills in the South, was announced by Dr. Harold Hansen, vice-president and general manager.

Management of the new operation and sales of its textile colors in the South will be under the direction of S. Y. Stribling III. William S. Pearson, J. Dorman Compton and Wilbur K. Hammett will continue to serve as technical sales representatives in their respective Southern sales territories.

A producer of textile colors, Hilton-Davis first established a regional sales service center in Greenville in 1954 in order to provide customers in the area with faster, more convenient technical service and delivery. During the past three years the company has occupied some 11,500 square feet of leased space in two separate locations in Greenville.

Construction has started and is scheduled to be completed in the Spring of 1958. The property is situated two miles north of Greenville on superhighway U. S. 29.

When in operation, Hilton-Davis' new facilities will provide 20,000 square feet of space for administrative offices, technical service laboratories and a warehouse. The laboratories are specifically intended to assist textile mills in solving color problems. Hilton-Davis manufactures a complete line of naphthols, fast color salts and fast color bases, as well as pigment printing colors of the oil-in-water and water-in-oil types, and stabilized azoic printing compounds.

The new building will serve mills in North and South Carolina, Virginia, West Virginia, Georgia, Alabama, Tennessee, Louisiana and Arkansas.

## McKiernan-Terry Buys Wiesner-Rapp Division

The textile division of McKiernan-Terry Corp., Dover, N. J., has purchased the textile machinery division of The Wiesner-Rapp Co. Inc. Buffalo, N. Y., according to a joint announcement of the two companies. Under the terms of the sale, McKiernan-Terry has received all textile machinery patents, engineering drawings, tools, fixtures, inventory and records. It will build and service machines formerly manufactured by Wiesner-Rapp.

## Quality Control Program Set Up For Helanca Products

The Heberlein Patent Corp., owner of the international trademark, Helanca, has set up a quality control program on finished prod-

ucts which bear the Helanca name. The purpose is to assure retailers and consumers that a product carrying the Helanca emblem and trademark has satisfied the high standards established by Heberlein.

The program, part of a stepped-up merchandising and promotion effort, calls for all merchandise that carries the newly-designed Helanca emblem and trademark to be submitted for approval to the Heberlein testing station at High Point, N. C. It also provides for periodic re-examination without advance notice.

Manufacturers can obtain hangtags which certify that their products have passed stringent quality control tests from the yarn to the finished product.

## Hobbs To Distribute Jaco Autogil Guillotine

The Hobbs Mfg. Co., Worcester, Mass., has announced its appointment as exclusive distributor of the Jaco Autogil, a heavy duty, automatic power-operated guillotine. In joint statements, Vice-President Stewart F. Oakes of Hobbs and President Theodore Cotton of Jaco Devices Inc. of Hingham, noted the distributorship was set up to afford a broader representation in sales and service. The Jaco Autogil is designed to automatically measure, cut and count textile stock to accurate lengths. The unit is available in two models. Model 5 for materials up to 5" in width and Model 15 for materials up to 15" in width, Type S cuts from a fraction of an inch to 8" in length and is infinitely variable. Type L with special cams can cut from a fraction of an inch to 96" and is also infinitely variable. Larger lengths can be cut on special Autogils. Material can be cut up to 3/16" thick. The machine has production speeds from 120 cuts per min-

## A. E. Staley Mfg. Co. To Enlarge Illinois Plant

The A. E. Staley Mfg. Co. will add 2 floors and additional processing equipment to increase production capacity of the new modified starch drying building at its Decatur, Ill., plant. Construction is scheduled to start in February and be completed next September. Added processing capacity involved will enable Staley's to better serve a bigger market for special modified starches in the textile industry. The addition will extend the seventh and eighth floors of the existing structure westward over the six-story portion of the building. The added 14,114 square feet of floor area will accommodate two more pairs of starch drying and filtering units.

## National Starch Products Inc. Reports 13% Increase In Sales

Increase of 13% in net sales of National Starch Products Inc. to a record high and a gain of 20% in net income for the year ended Dec. 31, 1957, was reported by the company.

Net sales were \$43,745,779 compared with \$38,573,717 in 1956. The growth in sales resulted largely from an increase in units shipped since selling prices were not

changed materially, the company stated, adding that a portion was due to the inclusion for the first time in 1957 of figures for National Adhesives Ltd. England.

Net profit for last year was \$2,676,535, equal to \$2.99 a share on the 878,964 shares outstanding. This compares with the 1956 net of \$2,231,132, or \$2.53 a share on the 864,168 shares outstanding last year after adjustment for a 10% stock dividend paid March 25, 1957.

In 1957 a \$1,500,000 capital program was initiated. The program called for expenditure of \$1,000,000 in 1957 and the balance in 1958 and is proceeding on schedule. For the year 1958, a new program amounting to \$2,000,000 is being considered, which is expected to be completed in the middle of 1959.

The research and development program of National Starch Products has resulted in new resin-based products for non-woven fabrics binders.

## Shell Ships Hydrogen Peroxide From Its Plant In Norco, La.

Shell Chemical Corp. has begun shipping hydrogen peroxide in tank car quantities from its new plant at Norco, La. The peroxide, available in several concentrations, is made by a new organic process. As a supplier of hydrogen peroxide located near the heart of the Southern cotton bleaching industry, Shell says the new plant is an important development in the Gulf coast chemical industries serving textile manufacturers.

## Du Pont Nylon Plant Opens In Richmond, Va.

Du Pont's new multi-million-dollar plant for the production of heavy denier nylon for use in tire cord and industrial products has begun operation at Richmond, Va. This fourth Du Pont nylon plant will produce 40 million lbs. of fiber annually. It was erected on the same site as the company's rayon plant, and for the first time the company will manufacture two textile fibers at the same location.

## Paramount Packaging Buys Flexible Packaging Division

Paramount Packaging Corp., Philadelphia, Pa., has acquired the flexible packaging division of Container Corp. of America, Chicago, Ill., in another phase of its 30th anniversary expansion and modernization program. The new Chicago division of Paramount Packaging will be under the general management of Irvin Isen, vicepresident and Joseph Gauss, sales manager, along with former Container Corp. personnel. Paramount will continue to service all former Container Corp. accounts from the Chicago division. This acquisition will give Paramount complete facilities for furnishing multi-color rotogravure, letterpress and flexographic printing on cellophane, paper, polyethylene, mylar, pliofilm, acetate, foil and also for converting these materials into printed rolls, bags, sheets, envelopes and pouches.



# Myaellye Myaellye Myaellye

[Exclusive and Timely News from the Nation's Capital]

It now appears certain that higher costs of national defense will be met through deficit financing and increased national debt. Spending in other fields of government activity will not be reduced. All unions and many business men are joining in the demand for tax cuts at a time when spending exceeds Treasury income. In any event, the net result is probably more inflation, with higher living costs and another drop in the buying power of the dollar.

Spending in the next fiscal year is expected to exceed \$74 billion, and to climb to \$80 billion before the Eisenhower term ends. In addition to higher spending for defense is a proposed wage increase of \$400 to \$700 a year for government employees, higher welfare grants, and more funds for the new Federal highway system. Unions are ready to fall into line with higher government pay with demands for another round of wage increases in industry.

House members who are crying out for a tax cut this year are well aware that none is in sight, even if sought by the president. The Ways and Means Committee does not intend to report any bill calling for reduced taxes, whether income or excises. Sentiment in the Senate Finance Committee is even stronger against a tax cut. The fact is that it will be a miracle if taxes aren't increased within the next two years.

Five-cent postage for letters is not expected to meet with much opposition in the House, but resistance to passage is strong in the Senate. Chief claim is that the money is needed to cover costs of a proposed wage increase to postal workers, although there have been five increases since the end of the war. Costs of air mail would go to ten cents an ounce. The Post Office Department operates from an appropriation the same as other departments; all postal receipts go into the general fund of the Treasury.

This year's "pork barrel" bill is expected to reach a new high level in spending for "home districts." Projects already up for consideration bring the total well in excess of \$1.5 billion, with other items to be offered. The money is used for "water resources," chiefly in building dams and canals, deepening channels and setting up wild bird refugees.

The President's message to Congress on labor legislation went only half as far as many members of the House and Senate want to go. It did not mention some of the most controversial points, including a national right-to-work law and putting unions under anti-trust laws. The President proposed that states be allowed to act in labor cases where N.L.R.B. does not take jurisdiction, when in reality the effort is to limit federal pre-emption in this field.

Labor legislation of any kind becomes more unlikely in this Congress as the McClellan Committee continues to uncover abuses and stealing in unions. The belief exists that the committee should go further into its exploration, and should have opportunity to base legislative proposals on more abundant and complete testimony. Little support exists for enactment now of the recommendations of the President and Labor Secretary Mitchell in this area.

The A.F.L.-C.I.O. Executive Council has backed down from going to war with the giant teamsters union. Although the teamsters have been ousted, the



"Wow! Dillard paper sure makes those car cards look better!"

# Dillard COMPANY

GREENSBORO - CHARLOTTE - RALEIGH - WILMINGTON - WINSTON-SALEM - ATLANTA - MACON - AUGUSTA GREENVILLE - COLUMBIA - SPARTANBURG - ROANOKE - BRISTOL - KNOXVILLE - NASHVILLE - BIRMINGHAM

1926 "IF IT'S PAPER" 1958

A.F.L.-C.I.O. is not ready to charter local teamster unions that want to pull out. The reason given for postponing action is that too few locals have indicated they want to pull out, and there is not enough justification now for moving to set up a new teamster group in opposition to the Beck-Hoffa group.

While differences between Hoffa and 13 insurgent teamsters have been settled out of court, indication is the agreement has not settled anything. Hoffa attained his objective of becoming president of the union, although for the first time in history a major union has been placed under the direct control of a court. With the Hoffa crowd moving in, the insurgents are virtually frozen out.

April 15 is the deadline set by A.F.L.-C.I.O. for its member unions complying with its anti-racket code which calls for barring racketeers and gangsters from union office. By that time, the edict says, steps must be taken to hold "regular" union elections, and "safeguard rights" of the members. The action is intended primarily to head off legislation in Congress.

The A.F.L.-C.I.O. is ready to launch a new public relations program to make its unionism more palatable to the public. One idea is to distribute pamphlets to all public schools touting the union cause, and to put the federation's newspaper into all school and public libraries. Proposals run from paid television shows to a series of full page ads in 35 major newspapers. So far officials have been unable to decide on what kind of a program they want.

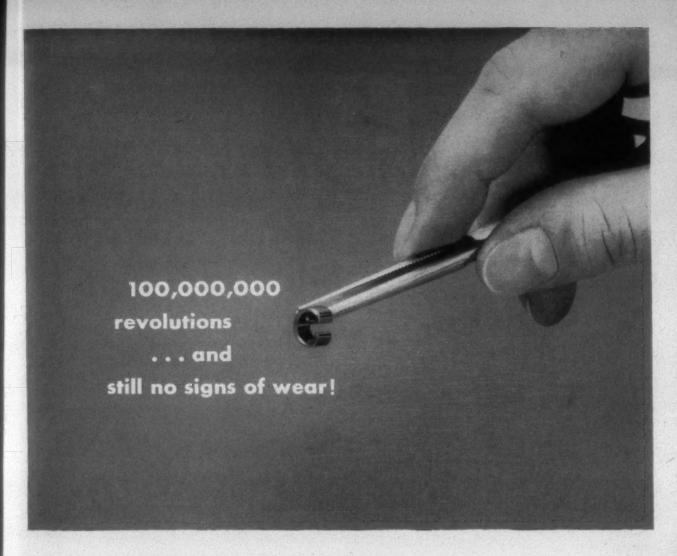
The principal purpose of such a public relations program would be to offset the scandals unearthed by the McClellan Committee. It would also like to check the anti-union sentiments stirred in the South over racial feeling and donations by unions to the N.A.A.C.P. Another hurdle is public resentment over jurisdictional feuds between unions. One group of officials contends a public relations program is wasted effort so long as the McClellan Committee remains active.

Officials of the Textile Workers Union of America are urging A.F.L.-C.I.O. to move fast in compelling a merger with the scandal-tainted United Textile Workers. Officials say textile workers have trouble in distinguishing between them, and believe that both are involved in corruption. The T.W.U.A. says it is losing members as a result of scandals and misuse of funds uncovered in the other union. It contends, too, that it has been "seriously hurt" by the revelations of corruption in other unions before the McClellan Committee.

Unions are informing their members that they can "expect the biggest fight over labor legislation this year since 1947." They say the "main fuel for the drive comes from reaction to the Senate Rackets Committee hearings." They express fear that new laws will "give the 'no man's land' jurisdiction to the states," require the election of union officers by secret ballot, curb union picketing and impose limitations on strikes.

The outlook for the Administration's aid-to-education program is bleak. One group in Congress thinks that \$1 billion, fixed by the President, is too meager; another group opposes Federal aid in any form, seeing it as an entering wedge to full Federal control of schools, and forcing integration on all public schools. Powerful opposition is coming from religious groups with private schools of their own who do not believe education should be a federal responsibility.

Negro leaders are planning a drive in the South to increase the registration of Negroes. The new Civil Rights Commission has been asked to participate in the campaign, which would be a departure from the function that has been ascribed to the commission. It may hear complaints on restriction on registration, but it does not have the power to engage in campaigning to promote registration.



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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, \$1.50; two years payable in advance, \$2.00;

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## Staff Additions

TWO recent additions have been made to the staff of Textile Bulletin. William Carter Dodson, former assistant to the president of Smith, Drum & Co., Philadelphia, Pa., has been named consulting editor, and James Thomas Miller Jr. has been named advertising representative in the New England and Metropolitan areas.







James T. Miller Jr.

Mr. Dodson, a native of Greensboro, N. C., and a graduate of the North Carolina State College School of Textiles, will serve TEXTILE BULLETIN as a consultant on the bleaching, dyeing and finishing phases of the textile industry. He recently retired from his position with Smith, Drum, a post he had held for 30 years. Thoroughly familiar with the wet finishing industry, he is the holder of a number of patents developed during his association with Smith, Drum. We think you will like and be aided by Mr. Dodson's periodic contributions to the BULLETIN's Bleaching, Dyeing and Finishing Department, and we invite you to watch for his byline.

Our new advertising representative, Mr. Miller, is a graduate of Cornell University at Ithaca, N. Y. For many years he was the New England representative for National Spinning Co. In 1947 he organized his own firm—the James T. Miller Co., cotton yarn brokers. His company represented a number of Southern spinning mills including Grantville (Ga.) Mills, Kings Mountain (N. C.) Mfg. Co., Tifton (Ga.) Cotton Mills, Howell Mfg. Co., Cherryville, N. C., Macanal Mills, Salisbury, N. C., Atlantic Cotton Mills, Macon, Ga., and others. He is a member of the Masons, the Providence, R. I., Chamber of Commerce, the Providence Sales Managers' Club and the Southern New England Textile Association. Active in civic affairs, he has served as chairman of Red Cross and United Fund drives in Johnston, R. I. A native of Philadelphia, Pa., he now makes his home at 133 Bluff Avenue, Cranston 5, R. I.

## The Old Swindle Sheet

THAT annual deadline around which a preponderance of American humor and facetious comment can be expected to revolve from here on out is nearly at hand again. In serious vein, it serves once more to remind that probably no other single factor has had a greater influence upon our economy and pattern of living in the present generation than the income tax, which came upon the scene years ago so relatively innocuously and has become gradually, to put it mildly, so amazing a complexity that even the official interpreters can hardly keep abreast of interpreting the changes or amendments which are constantly being made

The nature of our times, and the growth and ramifications of the not simple thing which our economy has become, necessitates that the income tax be regarded as something which now is eternal and everlasting; the only faint or perhaps fanciful hope which may be extant is that at some time in the future the whole unwieldly monstrosity might be overhauled, streamlined or reduced to a comparatively simple formula. Yet even that no doubt would necessitate starting all over again from scratch, and that is such a monumental legislative task of so far-reaching political implication that for the foreseeable future it might well be said to lie in the realm of scientific fantasy.

Theoretically and actually, of course, the income tax has come to be the great leveler of individual incomes, narrowing the gap between the top and the bottom. And very largely it has made Americans, other than those salaried employees choosing to use the slide-rule or "short form," a nation of amateur bookkeepers and receipt hoarders. That so complex a tax structure contains its inequities, such as the unrealistic rate or system of depreciation on textile machinery, for instance, goes without saying, of course.

Also the income tax laws have been a motivating factor in creating that phenomenon in contemporary American life, or more specifically in the business life of America, known as expense account living. While the extent of such practices lies somewhat in the realm of speculation, the fact that there have been individual cases of notorious and even fantastic abuse, as the Internal Revenue Service has taken occasion to point out, is hardly disputable. In fact this is given mainly as the reason for the government's income tax crackdown, starting with the year 1958, on expense accounts. The ruling itself is very simple—i.e., that all personal income tax returns for 1958 must report cash reimbursements for business expenses. The repercussions, however, can be far-reaching and extensive, both for corporations and the individual, as they affect the pattern or mechanics of the common expense account.

One of the most immediately noticeable effects of the ruling has been a rather sudden and tremendous boom in credit cards of all types. The year 1958, indeed, could well be the beginning of what might be called the "Era of the Credit Card." Relatively, the widespread use of the credit card is something new in the pattern of American living. Some types of credit cards have been kicking around for a long time; but some of those which have tended to become increasingly popular in recent years are comparatively new.

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There are, of course, innumerable types of credit cards, varying considerably in importance or convenience. For instance, merely to mention a very few, there is the Western Union credit card; the telephone credit card, which eliminates the necessity of a holder fishing in his pocket for change every time he wants to make a long distance call from a pay station; the various air, railroad and other transporation credit cards; the gasoline credit card, the Diners Club card, and so on. Of primary importance now are the facts that the credit cards furnish an easy to compute record of expenses and also make it possible for the employer to pay expense account bills directly.

For instance, a recent survey revealed that applications for credit cards were running considerably higher than they

## TEXTILE INDUSTRY SCHEDULE

- 1958 -

Mar. 5 (W)-A.A.T.T., Della Robbia Room, Vanderbilt Hotel, New York City.

Mar. 6-7 (Th-F)—Spring meeting, TEXTILE QUALITY CONTROL ASSO-CIATION, Poinsett Hotel, Greenville, S. C.

Mar. 13-14 (Th-F)—Spring meeting, SOUTHERN TEXTILE METHODS AND STANDARDS ASSOCIATION, The Clemson House, Clemson, S. C.

\*Mar. 13-14 (Th-F)—Annual Textile Electrical Conference, AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS, Georgia Institute of Technology, Atlants.

Mar. 15 (Sa)—Spring meeting, PIEDMONT DIVISION, SOUTHERN TEXTILE ASSOCIATION, Johnston Memorial Y.M.C.A., Charlotte, N. C.

Mar. 18-21 (Tu-F)—Spring meeting, A.S.T.M. COMMITTEE D-13 ON TEXTILES, Sheraton-Park Hotel, Washington, D. C.

Mar. 20-21 (Th-F)—Textile Engineering Conference, AMERICAN SO-CIETY OF MECHANICAL ENGINEERS, North Carolina State College. Raleigh, N. C.

Mar. 26-28 (W-F)—SOUTHEASTERN PERSONNEL CONFERENCE, Duke University, Durham, N. C.

Mar. 28 (F)—Spring meeting, SOUTH CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION, Clinton High School, Clinton, S. C. Apr. 2 (W)—A.A.T.T., Delia Robbia Room, Vanderbilt Hotel, New York City.

City.

Apr. 10-12 (Th-Sa)—Annual convention, AMERICAN COTTON MFRS.
INSTITUTE, Hollywood Beach Hotel, Hollywood, Fla.

INSTITUTE, Hollywood Beach Hotel, Hollywood, Fla.

Apr. 11-13 (F-Su)—Spring meeting, PIEDMONT SECTION, A.A.T.C.C.,
Washington Duke Hotel, Durham, N. C.

Apr. 12 (Sa)—Spring meeting, NORTHERN NORTH CAROLINA-VIR-GINIA DIVISION, SOUTHERN TEXTILE ASSOCIATION, Minera Springs High School, Winston-Salem, N. C.

Apr. 16-18 (W-F)—Annual meeting, ALABAMA TEXTILE MANUFAC-TURERS ASSOCIATION, Hotel Buena Vista, Biloxi, Miss.

Apr. 18 (F)—Spring meeting, EASTERN CAROLINA DIVISION, SOUTH-ERN TEXTILE ASSOCIATION, Turnsge's Bar-B-Cue. Durham, N. C.

\*Apr. 19 (Sa)—Spring meeting, TEXTILE OPERATING EXECUTIVES OF GEORGIA, Georgia Tech, Atlanta.

Apr. 23-25 (W-F)—Annual meeting. COTTON MANUFACTURERS AS-SOCIATION OF GEORGIA, Boca Raton Hotel, Boca Raton, Fla.

Apr. 24-26 (Th-Sa)—55th annual convention, PHI PSI FRATERNITY, Ben Franklin Hotel, Philadelphia, Pa.

Apr. 24-26 (Th-Sa)—National convention, DELTA KAPPA PHI FRATER-NITY, The New Bedford Hotel, New Bedford, Mass. Apr. 29-30 (Tu-W)—Spring meeting, Technical Advisory Committee and Board of Trustees, INSTITUTE OF TEXTILE TECHNOLOGY, Charlottesville, Va.

Apr. 30-May 1 (W-Th)—Spring meeting, THE FIBER SOCIETY, The Clemson House, Clemson, S. C.

May 3 (Sa)—Spring meeting, ALABAMA TEXTILE OPERATING EX-ECUTIVES, Thach Auditorium, Alabama Polytechnic Institute, Auburn, Ala.

May 7 (W)—A.A.T.T., Della Robbia Room, Vanderbilt Hotel, New York City.

May 19-24 (M-Sa)—NATIONAL COTTON WEEK, sponsored by the National Cotton Council of America.

May 26-29 (M-Th)—NATIONAL PACKAGING CONFERENCE AND EXPO-SITION (sponsored by American Management Assn.), New York Coliseum, New York City.

May 29-31 (Th-Sa)—Annual meeting, SOUTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION, The Cloister, Sea Island, Ga.

\*May 30-31 (F-Sa)—Annual meeting, Cotton Buyers and Classers Division, NORTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION, Grove Park Inn. Asheville, N. C.

June 4 (W)—A.A.T.T., Della Robbia Room, Vanderbiit Hotel, New York City.

June 19-21 (Th-Sa), Annual convention, SOUTHERN TEXTILE ASSN., The Grove Park, Asheville, N. C.

June 22-27 (Su-F)—61st annual meeting, AMERICAN SOCIETY FOR TESTING MATERIALS, Hotel Statler, Boston, Mass.

Sept. 9-10 (Tu-W)—Fall meeting, THE FIBER SOCIETY, Montreal, Canada.

Sept. 11-12 (Th-F)—Annual meeting, COMBED YARN SPINNERS ASSOCIATION, The Cloister, Sea Island, Ga.

Oct. 1-2 (W-Th)—Seventh annual CHEMICAL FINISHING CONFERENCE (sponsored by the National Cotton Council), Washington, D. C. Oct. 6-10 (M-F)—SOUTHERN TEXTILE EXPOSITION, Textile Hall, Greenville, S. C.

Oct. 14-17 (Tu-F)—Fall meeting, A.S.T.M. COMMITTEE D-13 ON TEX-TILES, Sheraton-McAlpin Hotel, New York City.

Oct. 25 (Sa)—Fall meeting, ALABAMA TEXTILE OPERATING EXECUTIVES, Thach Auditorium, Alabama Polytechnic Institute, Auburn.

Oct. 30-Nov. 1 (Th-Sa)—National convention, AMERICAN ASSN, OF TEXTILE CHEMISTS & COLORISTS, Conrad Hilton Hotel, Chicago. Ill.

Nov. 7-8 (F-Sa)—TEXTILE SEMINAR (sponsored by the University of Georgia Division of Clothing and Textiles in Extension, Teaching, Research), Georgia Center for Continuing Education, Athens, Ga.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday

\*Listed for the first time this month.

Tentative listing.

†Changed or corrected from previous issue.

vere last year at this time. The triggering of this boom is ue not so much to the fact that the credit card may furnish he professional man or the self-employed individual an asy and convenient record of expenses incurred-although his is indeed true—but rather to the fact that bills charged o a credit card and paid directly by the company or firm nvolve no reimbursement to the employee and need not be reported by him on his individual income tax return. On the other hand, of course, under the recent warning of the Internal Revenue Service, cash paid out for business bills and then repaid by an employer must be listed as part of gross income on line 5 before being deducted immediately below on line 6A.

A number of national accounting firms have said recently that they are notifying their clients of the advantages of the credit card system for handling expense accounts. Most large business organizations checked in a recent spot survey revealed they are planning greater use of credit cards for their traveling men on expense accounts in 1958. Virtually all companies with sales over \$1 million annually now have some men on credit cards, but the vast majority of companies in this category indicated that they are considering giving cards to more of their employees.

It goes without saying, of course, that companies on the credit cards system find other than tax advantages. For one thing, it is pointed out, expense accounts handled on credit are less likely to be padded. So one result of the Internal Revenue Service's announced plans to enforce the reporting of reimbursable expenses may be to relegate to the limbo of forgotten things the American institution that facetiously in the past has been referred to as "the old swindle sheet."

## A May Salute To The S.T.A.

TEXTILE BULLETIN extends warmest congratulations to the officers and members of the Southern Textile Association on the occasion of its 50th anniversary. Organized by a group of overseers in Spray, N. C., in the early Summer of 1908, the S.T.A. has grown right along with the textile industry in the South, both in the scope of its activities and in the number of its participating members. Its influence has always been devoted not only to the welfare of the industry as a whole, but as well to the interests of those operating executives in the industry whose job it is to keep our mills humming at top efficiency. No more commendable course could ever be charted by any organization.

Aside from extending best wishes where they duly should be bestowed, the BULLETIN's interest lies deeper. David Clark, the late founder and publisher of this journal, was one of the founders of the S.T.A., serving it throughout his lifetime in any way that he could. Junius Smith, our president and general manager, has served the Associate Members Division as Secretary-Treasurer since 1932. Former BULLETIN editors D. H. Hill, B. Ellis Royal and James McAden have served as past Secretaries and Treasurers, and your present editor, Jack Kissiah, is now serving in this same post.

These relationships have been naught but the most pleasant, and to show our pleasure in marking the association's 50th anniversary, the BULLETIN will devote its May issue to the Southern Textile Association. By doing so we hope to share with you a few of the rich memories it has afforded

us down through the years.

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# textile bulletin

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FEBRUARY 1958

NO. 2

## THE MISSING LINK

By GUS GUGGENHEIM, Consulting Editor

This article has been prepared to further develop ideas expressed at a symposium sponsored by the Uster Corp. at Clemson College last month. The basic reasoning is that testing devices and a quality control program are only as good as the interpretation of the tester's results and the implementation of the program.

A T the Uster Corp.'s January 23 symposium, held at the Clemson House, Clemson, S. C., the principal discussion point was the "missing link" in textile quality control. The object of the symposium was to drive home the idea that the control is not put into quality control until definite action follows the testing of samples. A shocking waste of equipment and effort is the result of the missing link, taking action after test results, and, in addition, potential maximum levels of quality and efficiency are never realized.

Quality control is, of course, like a snowball rolling down a hill. Improved picker laps make for better card sliver. Better card sliver enables the production of better drawing. More uniform drawing sliver makes higher quality roving and, in turn, superior yarns result. Efficiency improvements which result from more even stock, particularly in roving and spinning, match, and in some cases outweigh, in importance, the better appearance.

The quality control program, even though it is conceived in the best manner, cannot control quality unless a vigorous follow-up campaign is in effect. Sample taking, testing and record keeping is not enough. The results of tests must be interpreted into the correct terms. These terms must be understandable and serve as directives to the frame fixer. When this method is followed the program reaches its full potential in the control of quality.

## The Closed Loop

The testing program must constitute a closed loop if it is worth pursuing. Figure 1 illustrates the closed loop theory. The heavy dotted line represents the flow of material as it is processed. The lines leading from the

various processes represent the flow of test samples to the testing equipment. Lines lead from the test devices, through a definite and distinct program or procedure, to the machine fixers.

The information gained from the test device is then transmitted into direct and decisive action. Tests are repeated after action has been taken by the fixer. The test loop is thus closed. The quality control program which embraces all of these actions with equal importance is dynamic in nature and will meet with much success in reaching its objectives.

Stress is placed on the fact that each segment in the closed loop of

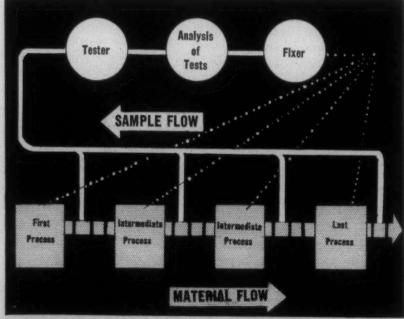


Fig. 1—The closed loop theory. The heavy dotted line represents the flow of material as it is processed. The lines leading from the various processes represent the flow of test samples to the testing equipment. Lines lead from the test devices, through a definite and distinct procedure, and on to the fixer.

testing is of equal importance in that if either is slighted or neglected completely the whole operation is a loss. A parallel in this principle is a toy electric train. If the train's track is securely fastened together, if the cars' wheels are squarely set on the track, if the lead wires from the track to the transformer are properly connected, if the transformer is plugged into the wall socket, the toy train will run. If any of these conditions are not met, the train just looks good. It will not run and is not of full use. By the same measure, a quality control program in which either of the operations are weak or neglected is useless. It may look good but its aim, the control of quality, cannot be reached.

Testing instruments which are not hinged to a well conceived and well implemented program simply look good. No matter how expensive the instruments, or how well standard conditions are maintained in the laboratory, or how much everyone wants it to work, the program will never prove worthwhile.

## Programming For Quality

There are probably as many programs for controlling quality as there are mills doing the work. There is no definite, set quality control program. There are, however, several elements which may be found in all programs which work successfully.

Since any system depends upon people for action, one of the most important features of the successful control program is clearly defined lines of responsibility. Some one person must definitely be responsible for sample taking on certain machines. The sample-taker or tester (he may be the same person) must have a definite reporting procedure. He may report to his superior in the laboratory, the departmental supervisor or the machine fixer. Whichever method is used, the object should be to test and report quickly in order that word may be passed for direct action to be taken at the machine.

The successful control program also has provisions for retests on machines which have been found defective. These retests should continue after each corrective action is taken until the machine is doing work of acceptable quality. If the machine cannot be brought to the acceptable level of quality, the communication lines to upper brackets in the mill organization

TAKE SAMPLE 2 TEST SAMPLE **SINTERPRET RESULTS** MACHINE TESTING

BRE-TEST SAMPLE

should be clearly defined and open. A new parts order may be required or the machine may have to be replaced.

## Gearing Diagrams

Making and maintaining accurate gearing diagrams and completing appropriate calculations are a requisite for most successful quality control programs. This is especially true when using the Uster Corp.'s Spectrograph. The analysis and interpretation of spectrograms is made quit simple by using gearing diagrams. When the results of the calculations of gearing are presented in proper fashion correcting defects is reduced to its simplest form.

When supplied with gearing diagrams and calculations, machine fixers can be trained to analyze spectrograms and correct defects. The preparation of these diagrams and the training of the fixers is a job which may best be done by consultants because of their greater variety of experience in this work. This is not necessarily true, however, and anyone can do it provided he goes about it in the right way.

Another phase of quality control which is found in all successful programs is accurately computed sampling frequencies. There are far too many deliveries in the mill to test each of them. There are usually far too many frames in the mill to test each of them every day. Finding the correct number of a given type of frames and the number of deliveries from each frame, to test in order to maintain control over quality is a rather difficult problem. This is illustrated by an article which appeared last month in this journal. The article concerned itself with an explanation of the determination of correct samplings for the control of sizings. As mentioned in the previous paragraph, this may best be done by consultants because of their variety of experience in such matters.

## Aggressive Testing Procedures

A list of some of the requisites to a successful quality control program could not be complete without mentioning the need for aggressive testing procedures. Part Four of an article entitled, "A Manual For Testing Procedures" which appeared in the November 1956 Textile Bulletin sums it up rather aptly. The article says: "The first requirement for controlling sliver short-term variation is an aggressive testing procedure. This aggressive test-

ing procedure is one which actively pursues each card and demands quick corrective action. . . The rugged, 'do something, even if it's wrong,' school fits in well here. . . . A spirit which is kindred to doggedness is required of the tester and the card room supervisor."

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This sort of attitude will take care of the missing link in quality control. The actual control of quality can come about only after the loop of testing—

take sample, test sample, interpret test results, fix machine, retest sample—is closed. The various segments of the closed loop must each be considered as equal partners. Testing without fixing is not effective and fixing without testing to find if an improvement has been made is not effective.

The most elemental testing equipment, if it is operating in a closed loop, can be of more real benefit to the operation of the mill than a laboratory

full of electronic whiz-bangs which are run for testing purposes only. Neglect sampling, or testing, or interpreting, or fixing and the quality control program is doomed to mediocrity or a quagmire of ineffectiveness. Treating each segment of the testing loop as an equal partner and pressing each segment with aggressive determination assures the successful operation of a dynamic quality control program which can really control quality.

# The Practical Utilization Of Non-Woven Fabrics

By FRANCIS M. BURESH, Textile Consultant



The following is a report on a symposium sponsored last month in New York City by the Textile Section of the New York Board of Trade. The meeting was devoted to discussions on some practical uses for non-woven fabrics. The author of

this wrap-up is widely recognized as an authority on the subject of non-wovens.

THE expanding potential in the non-woven fabric field was demonstrated by the number in attendance and the diversity of interest at the luncheon-symposium of the Textile Section of the New York Board of Trade January 28 at the Sheraton Astor. Over 400 representatives of 128 firms and organizations turned out to hear a panel of speakers discuss "The Practical Utilization of Non-Woven Fabrics." This report will cover what this writer considers highlights as well as an occasional point of disagreement.

It was predicted that the annual production of non-wovens would increase from an estimated 90,000,000 pounds in 1957 to 200,000,000 pounds by 1960; between 25 and 30 non-woven producers are now in the field. (Our present count indicates there are 43 U. S. producers, plus five others either in the pilot plant stage or are synthetic fiber producers doing research, as well as 15 foreign producers.) The technical know-how and chemistry required are considerable. The costs involved are very high. It was estimated that a budget of \$500,000 is required to enter the non-woven business successfully, due in a large part to the time and expense involved in engineering a line of fabrics acceptable to the trade.

The bulk of non-wovens have so far been largely made from the cellulose fibers (cotton, viscose and acetate), but the higher priced man-made fibers—nylon, Dacron, Acrilan, Dynel and Orlon—and wool are becoming increasingly important in the higher priced, more durable grades of non-wovens which must be custom-engineered for specific industrial, automotive and apparel applications. Most non-wovens up to now have been sold in the greige, but finishing techniques are being developed to produce fabrics with better physical properties, hand, durability and highly decorative properties such as color, pattern, nubs and metallics.

One speaker at the symposium predicted that the biggest potential lies in disposable fabrics but the writer does not concur in this view as by far the majority of the producers entering the field during the past five years have been concentrating on carefully engineered non-disposable fabrics using higher and higher priced fibers and more elaborate compounding techniques to obtain the type of non-wovens or knitted fabrics by doing a better job in a specific application.

Thomas O. Boucher, Chicopee Mills, vice-chairman of the Textile Section, was panel moderator. Also on the program was Ralph J. Bachenheimer, Iselin-Jefferson Co., who is Section Chairman. Following is a summation of remarks made by panelists at the symposium. (Some of the comments are those of the writer.—Eds.)

## Howard F. Shearer, American Viscose Corp., "Cellulosic Fibers."

Poundage of cellulosics account for 85 per cent of fibers used in non-wovens. Growth in poundage is mainly in viscose and acetate rather than cotton because of price and quality considerations. Virgin staple is required because specific deniers, 'crimps, lengths and finishes are necessary to properly engineer fabrics for the automotive and industrial trades where, in many cases, products must be "electrically clean" to be suitable for electronic heat sealing operations. Some of the newer fiber developments in cellulosics in-

clude highly absorbent fibers for absorbent product applications and fine denier and micro-fine fibers (under 1 denier per filament) for industrial filter applications.

## J. R. Emery, The Du Pont Co., "All Other Fibers Including Nylon and Acrylics."

The use of wool, nylon, the acrylics (Acrilan, Orlon and Dynel) and Dacron polyester fiber is increasing rapidly in non-wovens. (This writer estimates that these fibers account for about 20 per cent of the present poundage.) Nylon was described as the "work-horse" of the higher priced synthetics and is used in higher poundages than the others. It is particularly useful either alone or in blends where high strength, elasticity, quick drying and drycleanability are required as in coaters fabrics, interlining, interfacing, shoe fabrics, etc. The acrylics are finding use in laminate overlays, filtration and various apparel and household uses where moth, mildew and rot resistance are critical. (It is our opinion that some of the newer acrylics such as Acrilan will be used more and more in jacket and coat interlinings, comforters, pillow stuffers, etc., because of their extremely high bulk, soft hand, warmth and bulk recovery properties as well as being hydrophobic (quick drying) and dimensionally stable.) Dacron polyester fiber is finding its principle application in electrical end uses (tapes, etc.). Wool is being used in blends to produce loft and soft mellow hand. (The writer has known wool to be used very recently this past year in blends in automotive plumpers—side panels, seat bolsters and trims-because the 100 per cent cellulosics were found to be unsatisfactory for the desired loft re-

## R. G. Stoll, Celanese Corp. of America, "Bonding Agents for Non-Wovens."

Dr. Stoll reviewed major binder systems being used for both saturator and spray bonding (for high-loft fabrics) which include blended nitrile latices, styrene rubber, polyvinyl chloride, polyvinyl acetate and polyacrylic, as being the more important types for non-woven use in emulsion form. Water-borne systems are used almost exclusively in the industry. It was pointed out that a great deal of knowhow and chemistry are needed to permit the successful handling of these binder systems and an understanding of the compounding necessary with the addition of curing agents, heat sensitizing agents, accelerators, wetting agents, plasticizers, etc. Dr. Stoll touched on the dry powder bonding system, the thermoplastic fibers, such as Vinyon HH resin staple and plasticized cellulose acetate, but did not mention the new synthetic needle felts or non-wovens which are becoming increasingly important in the industry. Some observers feel that one approach to a successful non-woven for outerwear will be some combination of a needled synthetic felt which has been further modified by resin treatment, heat shrinkage or chemical modification.

## John Smith, Chicopee Mfg. Co., "Methods of Manufacturing Non-Woven Fabrics."

Well known methods of forming fibrous webs, such as cards, garnets, lappers, etc., were reviewed as well as the newer airlay processes, as airdoffing cards and garnet systems and the specialized Rando Feeder and Rando Webber. No details were given on the bonding, drying and finishing techniques in general use. In answer to the question, "Is

the non-woven industry satisfied with machinery now available for webbing and bonding?" Mr. Smith answered, "No. It has done much, though, to adapt conventional machinery to non-wovens." (It is our opinion that the industry is more and more turning to specialized airlay equipment for webbing as compared with the older carding methods, particularly for the new carefully engineered non-disposable type of non-wovens. Also the industry does have available satisfactory bonding, saturation, spray and needling equipment, along with specially designed drying and curing ovens through engineers and various machinery suppliers experienced in that art.)

## Doyle C. Nicely, Chemstrand Corp., "Finishing and Dyeing of Non-Woven Fabrics."

The public's increased acceptance of non-wovens will in a large measure be influenced by our ability to finish the materials and obtain the desired characteristics, Mr. Nicely pointed out. Most non-wovens are still marketed in the greige but as newer laminating, decorative and apparel fabrics are developed more finishing will be needed to increase their value and acceptance. The improvement of hand and durability are particularly important to develop successful outerwear fabrics and these improvements will come by improved binder systems and improved finishing techniques.

## D. V. Probasco, Wellington Sears Co., "Engineering and Designing Non-Woven Fabrics For Specific End Uses."

The five steps listed for engineering non-woven fabrics for specific applications were: "(1) analyze the application carefully; (2) make certain the non-woven can do the job against all competition; (3) educate the customer or end user to appreciate the abilities of the non-woven to do the job; (4) deliver and merchandise a product so soundly designed and well engineered that any other material will have a difficult and perhaps impossible job competing; and (5) avoid mis-application wherein either the wrong material is used or a non-woven is used when another material is superior for the purpose."

### William M. Klothe, Pellon Corp., "Sales and Merchandising of Non-Wovens."

Special emphasis was given one point made by Mr. Probasco, namely that in order to insure the sale of non-wovens we must avoid their mis-application. The market for non-wovens has just been scratched. Alert and intelligent selling in co-operation with fabrics engineered for specific jobs will expand this market over and over again. He pointed out that non-wovens will not replace or displace woven fabric but rather will help to expand the use of all textiles.

## Stephen I. Rudo, Werner Textile Consultants, "The Future of Non-Woven Fabrics."

Mr. Rudo made some of the predictions in connection with disposable items mentioned earlier in this article. He stated further that the most urgent problems to be solved are how to impart fashion and style to non-woven products, how to engineer better seam strength, heat sealing, softer hand and controlled reproducible quality.

A Profile

Walter S. Wantzonen

## Walter S. Montgomery

President & Treasurer Spartan Mills Spartanburg, S. C.

BY HAZEL TROTTER

IN Spartanburg, S. C., it is said that the best method of insuring the success of a worthy civic enterprise is to sell it first to Walter S. Montgomery. It is only in rare instances that he has been sold a "bill of goods" on a civic matter, for he is civic minded, a tireless searcher after the truth, isn't the least bit reticent when it comes to asking questions, and in addition has a disconcerting habit of always making up his own mind.

Nevertheless his office at Spartan Mills is besieged on occasion by callers, and the president himself is generally loaded with more than his share of civic responsibilities. This has been going on for a long time and many of the good things that Spartanburg has in a greater measure than most cities of comparable size and wealth can be—and are—attributed to the generosity, organizing ability, willingness to work, and the doggedness of Walter S. Mont-

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He was one of the prime movers in the establishment of the Foundation for Spartanburg County, which has been responsible for many of the civic and educational projects that have enriched Spartanburg's life. He headed the foundation for seven years as its second chairman, and is now serving on the National Committee of Community Foundations. The foundation is devoted to improving Spartanburg's facilities for education, recreation and health. It provides scholarships to worthy students, and has conducted surveys on health, schools and library needs. Spartans give a great deal of credit to Mr. Montgomery for the foundation's success.

Such evidences of unflagging community spirit come naturally to Walter Montgomery. The fact that the Montgomery family has a big stake in Spartanburg, financially and historically, has served to sharpen his civic consciousness. He is the third generation of the Montgomery family to head Spartan Mills, which now consists of three divisions—Spartan, Beaumont and Startex. Spartan's two plants are almost in downtown Spartanburg. It is the city's largest manufacturing enterprise and second biggest taxpayer.

Those familiar with the textile industry cannot recall a program which has been advanced "for the good" of the

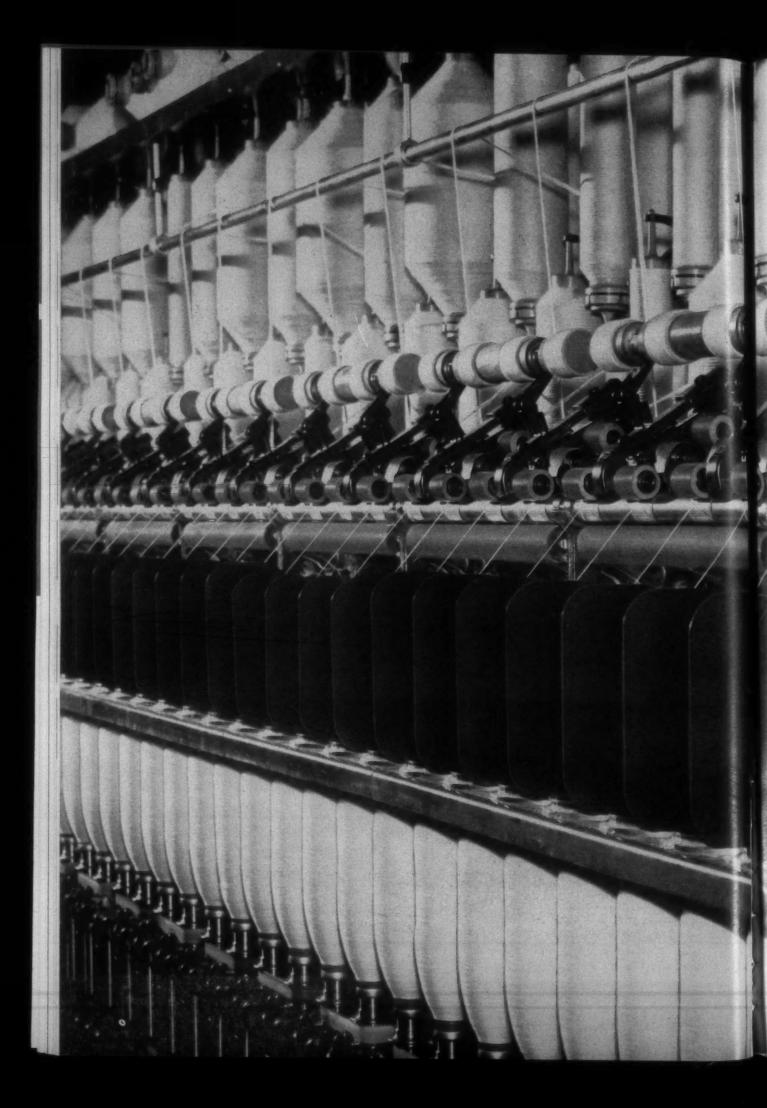


whole textile industry that has not met with Mr. Montgomery's enthusiastic co-operation. Admittedly, it is difficult for an industry composed of a large number of companies operated by a great many "individualists" to get together on plans which may appear to be costly in the beginning even though they will benefit all in the long run. But Mr. Montgomery is greatly concerned about the textile industry and the cotton farmer and feels that the time is here for some realistic thinking and co-operative action to assure their future.

## Former A.C.M.I. President

Mr. Montgomery has often been called upon by the industry for leadership. He is a former president of the American Cotton Manufacturers Institute and is a member of its board. He was a member of the Capehart Mission to South America in 1953 and served on the Textile Mission to Europe during the war years.

As far as today's textile picture is concerned, Mr. Montgomery points out that the mills in this country continue to glut the market with their production, turning out such volume that they have to sell at what they can get rather than for a fair price. Of course, idle machinery increases costs, but Mr. Montgomery believes it would be much better to run two weeks at a fair profit than three weeks at no profit. And he thinks it is evident that something is wrong when the American textile industry made a gross profit of only two per cent last year. If they sell their goods,





the producers are meeting the market. The fellow who won't sell at a profit has to shut down. We must either control production or keep foreign goods out, Mr. Montgomery says. And he adds that he thinks the Southern senators should get together and see to it that this essential industry is not liquidated to a point that might endanger our national security.

## 'Young Walter'

His son, Walter, III, who recently returned from a year spent visiting textile industries of other countries, shares the elder Montgomery's uncertainty about the future of this country's textile industry. He reports that each European country has a well established textile industry. Many of the mills have been in business for a long time. They employ hard-working people. They are well equipped with new or modernized machinery and the most recent technological ideas are widely used. Testing procedures, quality controls and finishing processes are outstanding, and European textiles have a wide reputation for quality and fashion. The European industries, he found, buy cotton at the world market price, pay their employees and management people incomes one-fourth to one-third our levels, and enjoy local markets protected by their governments with textile import quotas. A large part of their textile production has been exported to Africa, the Near East. Pakistan, India, Southeast Asia, Australia, New Zealand and South America.

In Africa, he points out, only one mill of the 22 he visited was more than ten years old, and every mill was increasing its production. These mills are equipped with new machinery and managed by experienced textile people from Europe. Increasing quantities of cotton are grown for local use and for export. Employees are anxious to work and quick to learn, but are not yet accustomed to working eight hours a day and five or six days a week. The result is



Employees of Spartan Mills often refer to the Montgomerys as "Mr. Walter" and "Young Walter." The latter just returned recently from a 50-week tour of the world's cotton industry.

high employee turnover and low machine efficiency even though the mills are greatly over-staffed by U. S. and European standards. However, with low wages of \$1 a day, with low taxes and with government protection, the mills are profitable and expanding.

Pakistan and India, too, have very important textile industries with total equipment nearly two-thirds that of our American industry. Each is also a large grower of cotton. Both seek to be world powers. To do so they must industrialize. That requires foreign exchange, and to acquire foreign exchange, they must sell what they have-raw cotton and cotton textiles. India is the world's second largest exporter of textiles, topped only by Japan. To encourage further growth in textile exports, both governments maintain low domestic prices for cotton, 15 cents a pound, and offer special subsidies. The combination of low-priced cotton, willing employees from a vast unemployed population working for six to twelve cents an hour, good machinery, well trained managements, and local import quotas makes it possible for their exports to be the lowest priced and yet for their mills to be the most profitable in the world.

Young Walter also found small but expanding textile industries in Australia, New Zealand and Southeast Asia. With large populations to support domestic industries and with governments eager to industrialize their countries, textile mills are encouraged and protected from low-priced imports.

Highly efficient, newly equipped, large scale textile industries exist in Hongkong, Formosa and Japan. They buy cotton skillfully at world market prices and they enjoy many forms of governmental aid.

"Old" textile exporting countries need a new market because their former markets are now manufacturing textiles. "New" ones seek a new market because they need foreign exchange. The new market is America, where the world's most efficient textile industry, using the world's highest priced cotton and the world's highest paid employees, paying the highest taxes and receiving the poorest government support, is not able to meet the competition of foreign textiles in its own U. S. market. Like his father, the younger Mr. Montgomery believes that unless effective leglislation is enacted there will be a continuing liquidation of mills.

## Concern Begins At Home

The Montgomerys' concern with textile industry problems, like charity, begins at home, for both feel that Spartan Mills must be kept in profitable operation not only for the owners but also to provide jobs for employees.

Spartan Mills' three divisions are known over a wide area in upper South Carolina as "a good place to work." And the firm's 4,000 employees remain with it. It is not uncommon to find a fourth generation employee at work in a plant which his great-grandfather helped get into production.

Walter III, now working in the cost department at the general offices, will go to the company's sales office in New York in a few months. After he completes his service there he will return to the mills. In due time he hopes—the word is his—to head the company, just as his great-grandfather, and his father have done. He is 28 and unmarried. Unlike many young men who prefer to strike out on their own rather than come into an already established business headed by a member of the "family," he has never

considered any career other than that of joining his father in Spartan Mills.

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Had the younger Montgomery chosen not to enter the textile business, his father certainly would have been disappointed, but in all likelihood would have understood. He himself did not join Spartan Mills until after the death of his father and did not enter the textile field at all until after a brother's death. This was in spite of the fact that most of the members of the family were textile men. He was the third son. He attended Spartanburg city schools and Hastoc, a preparatory school for boys. By the time he entered Virginia Military Institute at Lexington his two elder brothers had already determined to enter textile manufacturing.

By comparison with Frank, who was first in his class at Yale, Walter was an indifferent student. "I was poorly prepared for college," he says now, "and I didn't do well at all." Young when he entered—he was in knee pants when he left home and changed to long trousers on the train—and smaller than many of his fellow "Rats" at the famed institute, he found the scholastic grind tough. When graduation day finally came in 1920 and diplomas were handed out—in the order of each man's scholastic standing—Cadet Montgomery's was so far down the list he began to fear that the commandant would run out of diplomas before reaching his name. Frank, a flyer who served in the Air Corps with Capt. Elliott White Springs, now head of Springs Cotton Mills, was killed in action.

Unlike his brothers, Walter had developed little taste for cotton mill business as he grew up. His family had an interest in the Montgomery-Crawford Hardware Store in Spartanburg, so he went into this business. He liked it. Soon he had established a sporting goods department and was quite happy in the retail business.

Albert was associated with his father, who was then the operating head of both Spartan Mills and Laurens Mfg. Co. Albert is still remembered in Spartanburg as a young man of undeniable promise who had a charm and sweetness of character that endeared him to everyone. His untimely death in 1922 was a shock to the whole community. It also served to take Walter out of the hardware business and into the mill.

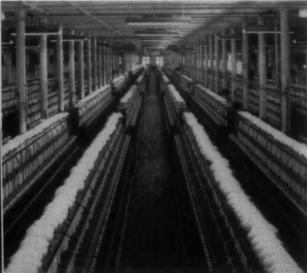
By the time Walter Montgomery Jr. entered the company as an employee, the firm had two plants, Spartan No. 1 and No. 2. The company had been founded by his grandfather, Capt. John H. Montgomery. Born at Hobbyville, S. C., 14 miles from Spartanburg, of farm parents, John grew up on the farm and went off to war as a soldier of the Confederacy. He was mustered out a captain and returned to the farm, but not for long. The story is told that one day his wife, looking out the window to where he was plowing, saw him leave his plow and start toward the house. When he came in she asked him what was the matter. He replied that he was just too smart to spend the rest of his life plowing and intended to get in some other business. He never plowed another day.

He went into Spartanburg and got a job as a salesman for the Merriman Fertilizer Co. of Baltimore, Md. He became so successful that the company changed the name of its South Carolina operation in his honor.

Captain Montgomery became interested in the mill at Pacolet Shoals and began to think of building one himself. With groundwork laid and seeking more financing, he went to Baltimore to see Mr. Merriman and told him he wanted to build a cotton mill. Mr. Merriman sent him to New York to Dr. Seth Milliken of the Deering-Milliken organization, farm machinery manufacturers. Captain Montgomery called on all his talents as a salesman. Dr. Milliken, a New Englander, became interested and agreed to invest \$10,000 in the captain's projected textile plant. This began an association of the Milliken and Montgomery families which still endures in a measure down to the present day.

Spartan No. 1 was completed the following year, in 1889. It had 35,000 spindles. Many of the old records are still preserved including minute books of stockholders' meetings at which capital was subscribed to build the original plant. Into this plant went five million bricks, more than had ever been made or laid by one company in South Carolina in any one year up to that time. The smokestack was 178 feet high, the highest in the state, and perhaps the only round stack in the South. People came for miles to look at it. When it was finished, Captain Montgomery and his directors were served a turkey dinner, cooked by Mrs. Montgomery, on a platform at the top of the stack, most





These pictures taken at Spartan's Beaumont Mills Division point up the fact that Spartan Mills is well equipped to go after its share of today's tight market. With the Montgomerys, modernization is a continuing process.

probably the first and only turkey dinner ever served atop a smokestack in the history of the world.

## Stockholders Report

In a report to his stockholders in 1890, Captain Montgomery had this to say of the new mill: "You should be proud of it, encourage it and help to encourage and elevate the people who have thus come among you; recognize the dignity of labor, and help to make those who live by it feel that they are citizens of the town, and with good behavior will be respected accordingly." He also discussed conditions obtaining at the time, pointing out that "very few mills within my knowledge have had during the past Summer and present Fall a sufficient number of operators," but indicated that when the crops were in, he would be able to get more workmen.

The Milliken group continued to expand its investment in the South and Captain Montgomery build additional mills. He lost his life in 1902 in a fall from a scaffold in Gainesville, Ga., where he was building a mill for Pacolet Mfg. Co. He was a good businessman as well as a pioneer in the textile business. Dr. Milliken often referred to him as the finest man he'd ever known.

With his death, his son Walter became president of Spartan Mills and treasurer of Laurens Mfg. Co. When Walter Jr. joined Spartan his uncles were operating Drayton, Pacolet and the Gainesville Mfg. Co. B. W. Montgomery was president and treasurer of Drayton and V. M. Montgomery headed Pacolet and Gainesville.

Walter Jr., as most young men of his time, served his apprenticeship in the mill—six months in the card room, three months in the spinning room, and three months in weaving. Then he was placed "on the outside," purchasing various supplies and repair parts, and handling maintenance of buildings and repairs to villages.

After four years he had worked his way up to the position of assistant treasurer. The following year, 1927, he was offered the job as treasurer of Gaffney Mfg. Co. at Gaffney, S. C. He accepted it and held it until 1944. In 1928 he married Rose Cornelson. Besides their son, Walter III, they have a daughter, Rose, now Mrs. Thomas F. Johnston of Memphis, Tenn.

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In 1929, Walter Sr. lost his life in an automobile accident returning home from a hunting trip. Walter Jr. succeeded him and continued to hold both posts until 1944.

By that time, Spartan Mills had acquired Startex and Beaumont Mfg. Co. All the Spartan plants were deep in war production. Beaumont, which had been converted to the manufacture of duck in 1941, was a stellar performer. It was the first cotton mill in the U. S. to go 100 per cent on war work and the first in South Carolina to be awarded an Army-Navy E for efficiency. Before the war's end, its "E" pennant contained four stars, the only South Carolina plant to be so honored.

The end of the war brought conversion problems and realignment of production machinery. It also saw the beginning of a program of modernization and installation of much new production machinery. By the time the program was finished, the company had spent some \$9 million.

By any standard of comparison, Spartan's Mils are modern, efficient and expertly run. All are air-conditioned, and the company's personnel department, established many years ago, is considered in the nature of a model for the industry. For years the company has adhered to a policy of promotions within the mills and from the ranks, based on seniority. A most carefully considered program of industrial relations gives employees the feeling that the company "is interested in us and treats us fair."

All production is sold in the greige except that of Startex, which turns out print cloths, dish towels and table-



An aerial view of Spartan Mills in downtown Spartanburg.

cloths. Beaumont manufactures industrial goods, canvasses, ducks, twills and sateens. Spartan produces sheetings, broadcloths, narrow print cloths, piques and poplins.

Walter Montgomery directs the operations of the three divisions and his other interests from a small office on the first floor of the red brick, red-tile roofed office building which sits almost in the street at the intersection of College and Howard Streets. The building is the general offices of the company. Once he worked at his grandfather's roll-top desk, but abandoned it after slamming the top on his fingers. Now he uses the golden oak desk that belonged to his father.

When he looks up from his work, directly before him are portraits of his forebears and associates who have had a hand in the development of textiles in his section. He is probably one of the few industrialists left who uses a dip pen and an ink stand in preference to a fountain pen. His three telephones are on shelves that jut from the wall behind his desk. And from long practice he can pick up the proper receiver without turning around. The furniture is comfortable, several chairs and a leather couch. The ash trays are for visitors. He is not a man to think twice about office decor, and he practically surrounds himself with assorted calendars, large and small.

After 35 years in the business—30 of which have been in positions of growing responsibilities—he shows no signs of slowing down. When he is in town he is at the mills early and late, Saturdays and holidays included, with time out only for committee and board meetings on projects in which he has enlisted or for which he has been drafted. His hobbies include hunting and photography. He is an Episcopalian and a member of the vestry of his church, the Church of the Advent. At present he is serving on the Foundation of the Diocese, which is in the midst of a campaign to raise \$350,000. He is a member of the board of trustees of Converse College in Spartanburg and last year was chairman of a campaign through which more than \$1 million was raised in Spartanburg County for the institution's long-range development program.

The cotton business being what it is, he is in New York much of his time, making his headquarters in the company's sales offices at 55 Worth Street. There, by all accounts, he goes "like a house afire," causing men younger than he to complain with a touch of humor that "if you follow Walter half a day you're dead."

## Alabama Textile Group Plans Meeting

The Alabama Textile Manufacturers Association will hold its 57th anniversary meeting April 16-18 at Buena Vista Hotel, Biloxi, Miss., according to Dwight M. Wilhelm, executive vice-president. The registration desk will be open Wednesday, April 16. First business session will be held at 2 p.m. Thursday. It will be followed by the annual meeting of the board of directors. Also meeting on April 17, will be the Alabama Textile Education Foundation. Foundation president, D. H. Morris III, Geneva (Ala.) Cotton Mills, will be in charge. A second business session will be held on Friday morning with the chairman of the board, R. C. Moyer, The Linen Thread Co. Inc., Blue Mountain, Ala., presiding. The women's buffet luncheon has been set for Friday noon with Friday afternoon given over to the golf tournament. Guest of the convention will be Miss Margaret McClinton, Alabama's Maid of Cotton.



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## - A.T. M.A. Re-Elects James H. Hunter-

THE largest attendance in the history of the American Textile Machinery Association marked the group's 25th annual meeting February 4 at The Algonquin Club in Boston. Highlight of the meeting was the re-election of James H. Hunter as president for the coming year. Mr. Hunter is president of James Hunter Machine Co., North Adams, Mass. He is also president of James Hunter Inc., Greenville, S. C., and Hunter Fiber Machine Co., Los Angeles, Calif.

W. K. Child, vice-president of the Draper Corp., Hopedale, Mass., was re-elected vice-president of the association. F. Gorham Brigham Jr., who was elected to the office of treasurer last October to fill the unexpired term of Samuel F. Rockwell, president of Davis & Furber Co., North Andover, Mass., was elected to that office. Mr. Brigham is treasurer of Saco-Lowell Shops, Boston.

Mr. Hunter described activities of the association during the past year as the most constructive type of work undertaken at any time by the machine builders. He pointed out that for the first time two allied industry groups, the A.T. M.A. and the American Cotton Manufacturers Institute, had pooled efforts toward solution of an over-all industry problem. He referred to the obsolescence factor in capital equipment throughout the textile industry as a major retardant in the potentially sound and profitable businesses of textile manufacture and textile machine building.

Mr. Hunter said to obtain a stronger cash flow for textile mills and to give both the mills and the machinery industry a revitalizing "shot in the arm," A.T.M.A. fully cooperated with the tax committee of A.C.M.I. in preparing a study presented by the latter to the advisory committee of Bulletin F., U. S. Bureau of Internal Revenue. The commissioner's Bulletin F. committee said the study was the best industry report presented to them by any industry on

the question of proper and just depreciation rates, Mr. Hunter told the group. The report "Profit Life of Textile Machinery" has been published by A.T.M.A. for textile trade use. (Copies of the report can be obtained at publication cost—\$1.00 per copy—by writing to Mrs. M. B. Andrews, Executive Secretary, A.T.M.A., P. O. Box 596, Vienna, Va.)

Mr. Hunter expressed hope that as a result of the joint effort of A.C.M.I. and A.T.M.A. that a substantial reduction in the depreciable lives of textile machinery will be granted. "Such a decision," said Mr. Hunter, "will give our customer industry the opportunity for a vast industrywide modernization program such as has not been attemped in many years."

#### **Directors Named**

Directors at large of the A.T.M.A. for the coming year include Roy G. Ross, vice-president, Barber-Colman Co., Rockford, Ill.; W. Frank Lowell, senior vice-president, Saco-Lowell Shops, Boston; W. K. Child; and J. Ebert Butterworth, president, H. W. Butterworth & Sons Co., Bethayres, Pa.

Other directors include J. Hugh Bolton, Whitin Machine Works, Whitinsville, Mass.; Thomas W. Stilwell, sales manager, textile division, The Warner & Swasey Co., Cleveland, Ohio; Frederic W. Howe Jr., president, Crompton & Knowles Corp., Worchester, Mass.; James H. Hunter; Robert Leeson, president, Universal Winding Co., Providence, R.I.; and P. Kay Schwartz, president, Proctor & Schwartz Inc.; Philadelphia. Richard Hunter, vice-president of James Hunter Machine Co., continues as assistant to the A.T.M.A. president. Mildred B. Andrews continues as executive secretary and director of public relations.



Richard Hunter, Child, James H. Hunter, Mrs. Andrews, Brigham

Officers of the American Textile Machinery Association include Richard Hunter, vice-president, James Hunter Machine Co., North Adams, Mass., assistant to the A.T.M.A. president; W. K. Child, vice-president of the Draper Corp., Hopedale, Mass., vice-president of A.T.M.A.; James H. Hunter, president of James Hunter Machine Co., North Adams, A.T.M.A. president; Mrs. Mildred B. Andrews, executive secretary; and F. Gorham Brigham Jr., treasurer of Saco-Lowell Shops, Boston, A.T.M.A. treasurer.

# Opening, Picking, Carding & Spinning

## The Effect Of-

## COMBER LAP PREPARATION

On Yarn Quality

By D. HUNTER CAUBLE, General Superintendent A. M. Smyre, Mfg. Co., Ranlo, N. C.

In a paper delivered earlier this month before the 1958 Cotton Research Clinic at Pinehurst, N. C., Mr. Cauble relates how A. M. Smyre went about improving comber-lap preparation. He points out the important role played by the Smyre laboratory in the development of improvements in the mill's manufacturing processes. The research clinic is sponsored annually by the National Cotton Council of America. This year's meeting was one of the most successful on record.

TORTON and others showed some years ago that in carding, the overwhelming majority of fibers have hooks on both ends but that the hook on the trailing end of the fibers in the sliver was larger than the one on the leading end. These larger hooks he termed "major hooks."

Further research showed that these hooks persisted through the drawing process, and that the efficiency of the combing process was materially affected by altering the direction of these fibers as they were presented to the comber. The experiments showed that if fibers were presented to the comber with the major hooks forward, a significant reduction in comber noil would result with no adverse effect on yarn quality.

Morton thus recommended an even number of sliver preparation processes be used between the card and the comber so that the proper number of reversals in orientation of the major hooks in the fibers would take place. He acknowledged, of course, that the savings depended largely on the particular economics of the industry in which the experiments were tried. He further pointed out that his findings were restricted to long-staple cottons. To quote his paper before the Combed Yarn Spinners Association in 1955: "There is no guarantee that with shorter and less expensive cottons, with American wage levels and by comparison with existing American practice, worthwhile dollar savings will necessarily emerge.

Morton's conjecture was borne out soon after in our own experiments and in those conducted by Morton during his stay at the School of Textiles, North Carolina State College,

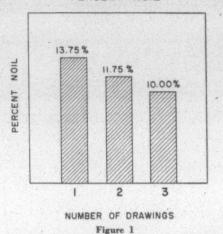


in 1955. While the details of these latter experiments are not yet available for release, it can be stated that the theory of using an even number of reversals did not work out on American cottons. American cottons and Egyptian cottons do not speak the same language, apparently.

## Lap Preparation

In our experiments at Smyre, we tried three methods of lap preparation: (1) one drawing followed by lap winding; (2) two drawings followed by lap winding; and (3) three drawings followed by lap winding. As seen in Fig. 1, using the first method, one drawing followed by lap winding, the noil removed at the comber was 13.75 per cent. Using the second method, two drawings and a lap winding, noil dropped two per cent to 11.75 per cent, thus bearing out Morton's results. Yarn strength dropped off about four per cent, however. There was no significant change in yarn uniformity as measured by evenness testers.

In the third trial, three drawings followed by the lap winder, a series that oriented the sliver so that the fiber hooks were on the trailing end entering the comber (a circumstance that should have raised comber noil, according to EFFECT OF NUMBER OF DRAWING OPERATIONS
ON
PERCENT NOIL



Morton) the noil again dropped, this time to ten per cent. Strength dropped seven per cent below that for one drawing process.

If the coarser American cotton fibers do not hook as readily as the Egyptian cottons, it can be assumed that the additional parallelization which results from increasing the number of drawing operations will present the fibers to the combing cycle in a fashion designed to reduce noil removal. If fibers in the lap are arranged like spaghetti in the box, less noils result in combing than when the fibers are arranged like spaghetti on a plate.

In our opinion, the yarn appearance was lower for the three drawing operations. Aside from this, however, there are obvious economic disadvantages in increasing the number of drawing operations. A saving of one per cent in noil reduces sliver cost 0.2 cents per pound. This saving, if carried through to yarn, reduces yarn cost 0.37 cents per pound after the return from sale of noil is considered. To add an extra preparatory process would require an additional 40 deliveries of drawing, at about \$1,500 per head. In addition, one more worker per shift would be required and amortization of these costs by the reduction in noil

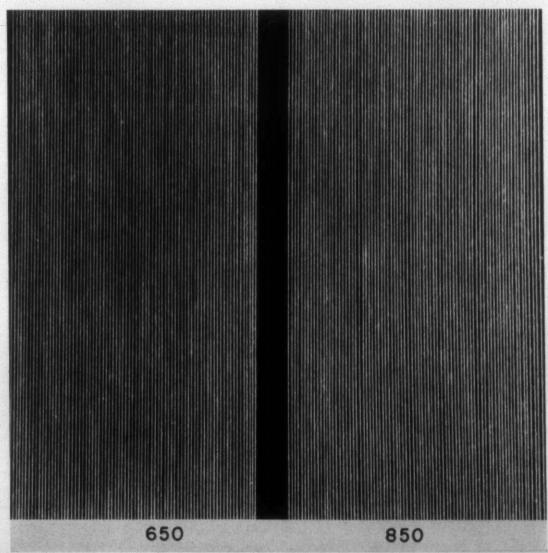


Figure 2-Comber lap weight; grains per yard.



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We have said "we build twisters from the smallest to the largest". The 1/6 scale model shown here was made in our shops by our skilled craftsmen, on their own time as a gift to the Boss.

It actually runs, and on your desk we can demonstrate with it how we have licked friction in Meadows Twister Frames.

The Jumbo twister that carries a 14" overall bobbin is our big one. Others range as you need them, and can be custom made. But the big new thing is friction freedom that cuts power load, reduces ends down, permits the highest speed operation available to you.

The Meadows Twisters were amply tested in actual mill operation before announcement. Upon announcement, the response was immediate, and actual orders received included one installation, now complete, totalling 76 frames.

What are your twisting needs? Contact us, and let us show you what Meadows Anti-Friction can do.



would require about five years, if the yarn quality made the installation worthwhile.

## Effect Of Comber Lap Preparation

	Number of Drawings				
Yarn Tests	1 D	2 D	3 D		
Percent Noil	13.75	11.75	10.00		
Skein Break (lb.)	126	124	122		
Yarn No.	19.75	19.35	19.10		
Break Factor	2488	2399	2330		
Twist Multiplier	3.20	3.20	3.20		
Uniformity:					
Brush % N. U.	65.0	64.7	65.5		
Uster Integrator	13.0	12.9	13.1		

### Comber Lap Preparation

		0.	

1	D	1	Process	Drawing-Lap	Winder	(2)
2	D	2	Process	Drawing-Lap	Winder	(3)
2	D	2	Process	Deawing In	Winder	(4)

Note: All drawing processes are 8 ends ups.

## Yarn Comparison

Fig. 2 shows a comparison of yarns produced from a 650-grain comber lap to that produced using an 850-grain lap. There is no significant difference seen in either appearance or strength. Through investigations of this type, we have made many changes over the past ten years in preparation for the combing process that were of benefit to us and that may be of interest for further study. To provide some background, A. M. Smyre Mfg. Co. produces combed knitting yarns, with an average count of 20s, from 11-inch Strict Middling cotton. We have 30,000 spindles in two mills and employ 470 people.

Our progress in improving comber-lap preparation began with carding. Our cards are kept in good mechanical condition and our mill laboratory checks the nep count and evenness of each card the day after it is ground and returned to production. If the quality of the web and sliver do not meet our standards, the card is re-checked until the trouble is corrected. Between grindings, all cards are rechecked periodically.

We feed a 14-ounce lap and produce a 50-grain sliver. We have adopted the speeds and settings for carding recommended by the School of Textiles, North Carolina State College, modified in some cases to suit our conditions. Through these settings and speeds we have raised our card production from seven to 11 pounds per hour. Our flat speed was reduced from 3½ to 2½ inches per minute, with proportionate savings in waste. We have some cards equipped with metallic clothing and plan to convert all cards to metallic in time. In addition to the savings in stripping and grinding time, we have found that we get 1½ to 1½ per cent less waste in carding and combing with no adverse effect on yarn quality.

### **Drawing Operation**

We use Ideal drawing frames, eight ends up, and produce a 43 grain sliver with a draft of about 9.3. Our front-roll speed is 300 feet per minute, and we found it desirable to use settings slightly more open than normal. We have learned that drawing at this relatively high speed requires maintaining equipment for processes prior to drawing in excellent mechanical condition, since mechanical troubles in these processes will show up in the quality of the drawing

sliver. To locate mechanical troubles that show up in changes in the quality of the drawing sliver we have made good use of the Uster Spectrograph.

Drawing sliver is made into an 850-grains-per-yard comber lap on a Saco-Lowell lap winder with 20 ends up. This lap is considerably heavier than the 600-grains-per-yard lap made formerly using a sliver lapper/ribbon lapper preparatory system.

To obtain proper combing of this heavy lap we have set the half-lap closer to the cushion plate, have set the top comb to penetrate the mass deeper, and have used the most open needling thus far available from the manufacturer. We have found that needles must be kept sharp and clean. We use flat needles in the top comb. Our previous comber production, on the Nasmith, was 12 pounds per hour. Our present Saco-Lowell combers produce 53 pounds per hour and we find that about three per cent less long fiber is removed in the noil.

After producing a lap of combed sliver, we pass the lap through finisher drawing. We use Saco-Lowell five-roll drawing, 16 ends up, with a front-roll speed of 186 feet per minute and produce a 60-grain sliver. Our roving frames are Saco-Lowell Model FS-2, producing a 10x5 package. One recent change made in the roving process was to wrap the roving one extra turn around the presser. Through the extra tension we were able to increase the weight of roving on the bobbin by 40 per cent, from 25 to 36½ ounces.

Our spinning is Whitin Casablanca in one mill and Saco-Lowell Gwaltney in the other. All our roving is double creeled.

## Laboratory Vital

A vital part of our mill is the laboratory that guides us in the development of improvements in our manufacturing processes. We have four men in this laboratory, a relatively high number for a mill with 30,000 spindles and 466 other employees. This works out to a ratio of 1 per 115 employees. These men spend about half their time on quality control and the rest in research and development work aimed at improving quality, cutting costs or increasing production. Aside from the usual assortment of balances, skein testers, etc., this laboratory is equipped with a lap tester, evenness tester, Spectrograph and micronaire. Our expenditures on research and development run close to one per cent of sales, considerably higher, we are told, than the average for the textile industry. We feel that this investment has always paid us ample dividends.

## Cotton Improvement Awards Announced

The grand award ceremony for the state winner of the Alabama Cotton Improvement Contest of the Alabama Textile Manuafcturers Association will be held February 28 in the Lawrence's Mill Cotton Improvement Community in Fayette County. F. M. Lyon of Opp, president of the A.T.M.A. will speak and present the \$1,000 award. Winners of the four \$250 district awards were the Greenwood Cotton Improvement Community, Calhoun County; Livingston Cotton Improvement Community, Sumter County; Lauderdale County's Central Cotton Improvement Community; and Moriah Cotton Improvement Community in Coosa County. The district awards were presented in ceremonies throughout the month at the various communities.

# Warp Preparation & Weaving

# Crompton & Knowles engineers have determined through a series of tests that BENT VIBRATOR LEVERS are

# AN UNNECESSARY EVIL

Troubled with bent vibrator levers? They can cause expensive defects in the pattern and breakage of combs, gears, harness jacks and other expensive parts. Learn from Crompton & Knowles how to prevent this expensive and unnecessary evil.

OCCASIONAL reports that mills are being troubled by bent vibrator levers have caused Crompton & Knowles engineers to make detailed examination of the design and metallurgy of the parts involved.

Since the results of these tests failed to reveal any deficiencies which would cause the vibrators to bend under normal operating conditions, further studies were made in an attempt to isolate any and all contributing factors. That malfunction of the lock knife, due to poor settings or adjustment of this mechanism, is undoubtedly the major cause of the trouble seems definitely proven by observations during these tests. The following description and diagrams show some of the conditions under which vibrator levers are subjected to sufficiently abnormal loads to cause them to bend.

## Condition Of Normal Operation

Fig. 1 shows a schematic diagram of the head motion as viewed from the front of the loom. Illustrated is the

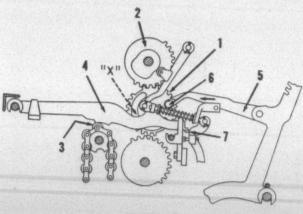
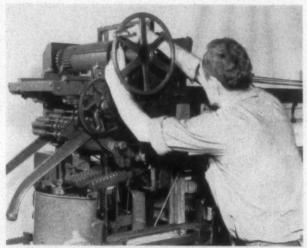
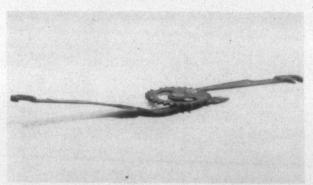


Figure 1

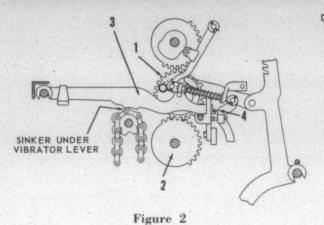


The loom fixer is shown here timing the lock knife cam.



When a vibrator becomes bent, such as shown here, it can not only produce an expensive defect in the pattern, but also occasions the breakage of many expensive items in the head motion—such as combs, gears, harness jacks, etc.

normal condition which causes the harnesses to be raised. The vibrator gear (1) is raised into mesh with top cylinder gear (2) because of presence of riser (chain roll) (3) under the "run" of vibrator lever (4). Note that the vibrator gear is completely out of mesh with the bottom cylinder gear. The rotation of gear (1) will cause vibrator connector (5) to move in an arc in the direction indicated by the arrow until pin (6) reaches a point designated as "X".



Observe that lock knife (7) is in its "in" position and that it is under the point of the vibrator lever.

#### Sinker Under Vibrator Lever

If the next indication from the harness or box chain is a sinker—as illustrated by Fig. 2—the following conditions will exist.

Vibrator gear (1) is lowered *into mesh* with bottom cylinder gear (2) because of the presence of a sinker (tube) under the "run" of vibrator lever (3). Note that gear (1) is *completely out of mesh* with the upper cylinder gear. Lock knife (4) is in its "in" position and *over* the tip of the vibrator lever.

Normally, when two gears are engaged and one gear is imparting motion to the other gear (in this case, the cylinder gear is driving the vibrator gear) there is a force trying to separate the two gears. Because the cylinder gear is fixed in solid bearings, the floating vibrator gear will have a tendency to rise out of mesh with this cylinder gear. However, if the lock knife is correctly in position, as is illustrated, the vibrator gear *cannot* rise out of mesh with the bottom cylinder gear.

It is generally true that a heavy harness load will create large forces that try to separate the gears. The lock knife will function properly with light harness loads even if the ends of the vibrators or the knives are slightly worn, but malfunctions will occur if the harness load becomes increased because of the increased forces tending to separate the gears.

## Condition Of Abnormal Operation

Fig. 3 illustrates a most serious malfunction caused by failure of the lock knife to hold the vibrator gear in mesh with the bottom cylinder gear. Study this condition—it is responsible for bent virbrator levers.

Although a sinker is under the "run" of vibrator lever (1) you will note that something has prevented vibrator gear (2) from becoming fully meshed with the bottom cylinder gear. This condition is caused by a failure of lock knife (3) to hold the end of the vibrator lever "down". When this malfunction occurs, gear (2) will be half in mesh with the top cylinder gear and half in mesh with the bottom cylinder gear in the manner illustrated.

As indicated by the arrows on cylinder gears, the bottom cylinder gear will try to rotate the vibrator gear in a clock-

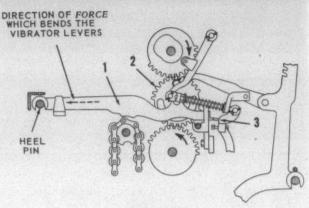


Figure 3

wise direction and the top cylinder will try to rotate the vibrator gear in a counter-clockwise direction. The resulting forces move the gear and vibrator lever in the only direction they can go—backward against the heel pin, as indicated by the broken arrow.

When this malfunction occurs, two things can happen: (1) vibrator lever will bend; (2) vibrator gear teeth will

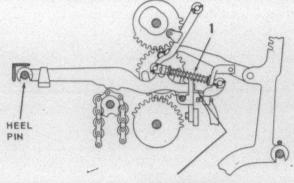
## Lock Knife Malfunctions

There are several circumstances which could cause the lock knife to be in an improper position, and therefore, cause damage to vibrator levers or vibrator gears.

(1) Improper timing of lock knife so that it does not get into position to hold the vibrator lever "down" before the bottom cylinder gear rotates the vibrator gear.

(2) Broken or weak spring on lock knife assembly. This is spring (1) on Fig. 4. Sometimes a weak spring will give a slow movement to the lock knife even though the timing is correct.

(3) Worn lock knife or worn tips on vibrator lever. Excessive wear of any of these parts will cause the vibrator



WORN LOCK KNIFE
OR
WORN ENDS ON
VIBRATOR
LEVERS
WILL PREVENT LOCK KNIFE
FROM HOLDING VIBRATOR
LEVERS IN THEIR DOWN
POSITION
Figure 4

## The Plus "Ingredient" That Makes A Difference

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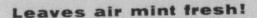
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Charles C. Switzer, Vice President
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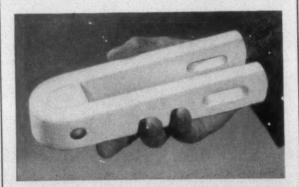
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### WARP PREPARATION & WEAVING-

levers to slip up over the lock knife in the manner illustrated by Fig. 4. Inspect the condition of the parts periodically.

#### Safety Device Malfunction

Most head motion looms are equipped with a safety device to prevent damage to the head motion parts should the lock knife fail to function properly. On the Crompton & Knowles W-2, W-3 or W-3A Looms, this safety feature is located in the gear on the crankshaft which transmits the drive to the upright shaft. It consists of a slip key instead of a conventional straight key. Unfortunately, this key is often tightened to the extent that slippage will not occur when there is an unusually abnormal load. This practice eliminates any chance of protection that the slip key could offer if the lock knife failed to function and an abnormal load was placed on the cylinder gears.

## Recommended Replacement Procedure

As a means of eliminating additional malfunction of the vibrator lever and vibrator gear assembly, avoid placing a new vibrator lever in a head motion with old vibrator levers—especially vibrator levers *badly worn* at the heel pin slot. Equip one or two looms completely with new vibrator levers, and use the old levers as replacements in head motions using old levers. Avoid the use of badly worn vibrator levers. Check the alignment of the levers by use of a vibrator gauge.

## Dan River Offers Scholarships

Four college scholarships worth a maximum of \$750 per year will be offered this year by Riverdan Benevolent Fund Inc. to employees or children of employees of either Riverdan or Dan River Mills Inc., Danville, Va. The scholarship program which was begun last year in recognition of Dan River's 75th anniversary, is aimed at providing an opportunity for higher education to deserving persons who would otherwise be unable to attend college. Scholarships will be renewed annually, provided the student maintains passing grades in all subjects, ranks in the top 50 per cent of his class, and meets the personal standards required by the college. Winners may select any two or four-year accredited college and may undertake any field of study they choose.

## Textile Tour Of Europe Set For Summer

Dr. Malcolm (Sandy) Campbell, dean of the School of Textiles at North Carolina State College, is conducting a tour through the major textile centers of Europe in the Summer of 1958. Included in the tour will be visits to plants, mills, colleges and research institutes in Manchester, London, Paris, Zurich, Rome, Milan, Stuttgart, Venice and Florence. The group will also visit the World's Fair at Brussells where textile industry exhibits from all parts of the world will be on display. Cost of the tour has been set at approximately \$1,199.50. Interested persons can contact Dean Campbell at the School of Textiles, N. C. State, Raleigh, N. C.

A Special Study

## YARN TENSION

And Its Problems

PART FOUR

By JAMES R. WRIGHT, Product Engineer Uster Corp., Charlotte, N. C.

THE following procedures are recommended for setting up and measuring tension on warpers and slashers with the Uster Custom Tension Recordograph. The Recordograph should be located close to the slasher or warper creel, with the head mounted on the boom. Set the attenuator to the correct scale and place the head in a position in line with the warp end or sheet from the cone or section beams. The weaving attachment should be used on the slasher beams. This may be applied regardless of how slow or fast the slasher is running or even if it is stopped. There is no danger of breaking the ends with the weaving attachment. The next step is to mark the slasher beam with a piece of chalk, so each revolution of the beam can be seen. Important factors to be considered in making a test

include:

(1) Speed of the slasher in yards per minute

(2) Diameter of the beam

(3) Type of bearing on the beam journals

(5) Type of bearing on the beam journals

(4) Type of brake used on section beams

(5) Type of system used in threading the yarn over the beams

(6) Type of squeeze roll and size box control

(7) Type of slasher drive.

The tension recorded from each section beam should be almost a straight line if it is under good tension control. The yarn will retain its breaking strength and good maximum elongation under these conditions. Slashed beams should not have more than two to four grams difference in beam tension.

With close control of tension, there will be minimum waste from the slasher and weaving operation. This will

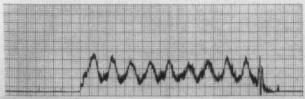
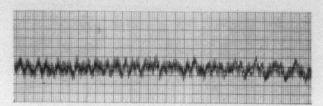


Fig. 1—This chart is an example of the tension pattern made by a warp beam with a bad journal. Excessive stretch is put in the yarn at the peaks. This stretch is set in by the sizing and the yarn's elongation is reduced.

also hold true when the yarn is put on the section beam at the warper.

It is very important to measure the tension at every section beam. If there is a high or erratic tension pattern on the chart, try to locate and correct the trouble by moving or adjusting the beam to the next position.

Fig. 1 gives a good indication of a bad beam journal at the height of these tension peaks. This, of course, is causing the yarn to be stretched. As the yarn passes through the size solution, it is set with a great deal of elongation taken out. The movement of the harness will subject the yarn to high and low tension, and without elongation, broken warp ends result.



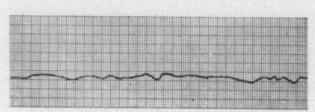


Fig. 2—These charts were made from warper beams in the same creel on the slasher. One of the beams has high tension, the other low. Besides having its elongation reduced, the yarn on the high tension beam will run longer and, therefore, make unnecessary pounds of waste.

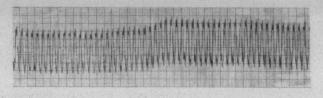
Fig. 2 shows two charts made from the same creel. Note the difference in the amount of tension. The low tension will run out first, leaving waste yarn on the other beam. This means that the yarn from the high tension beam has some of its elongation removed. Therefore, it does not have as good weaving characteristics. The cost of raw stock, labor, machinery and overhead from the start of opening to warping are in waste made at this operation. Through tension measurement, this waste may be reduced and weaving production and quality improved.

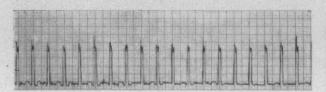
### Warp Tension

Irregular tension on warp threads, which occurs at times on one side and then the other side of fabrics, is frequently caused by improper tensioning during sizing and in the preceding processes. When this defect occurs, a study of the preparation of the yarn should be made as far back as warping and the preparation of the yarn on cones. Uneven yarn tension on cones should be avoided. Uneven tension in any group of ends in each part of the warp should be avoided.

Irregular tension of warp threads is of serious consequence in taffeta and other close sley fabrics where a plain weave is used and the finish is flat. With modern methods of testing tensions, the amount of tension recorded in grams is indicated, thereby making it easier to clear up the troubles or defects.

In most instances, the measurement of warper tension with the Recordograph is accomplished by positioning the





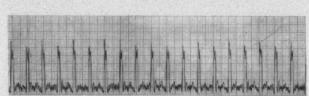


Fig. 3—These charts were made of improper tensions caused by defective loom parts. The top chart was made with improper setting of the whip roll and connector rod. The middle chart was made with an improperly set drop wire stand and worn warp beam journal. The peaks on the bottom chart are caused by a bad take-up roll.

head of the instrument between the front of the creel and the warper drive. With this placement, the boom can be positioned easily so that the head pulley will be in line with any end. The most common fault found in the warper creel is the great increase in tension occurring in the interval between the front and the back of the creel. It is best to measure the tension from the same cone position in several different places at the back of the creel and at the front of the creel. The minimum tension satisfactory for use at the back of the creel should be established and the tension of all other ends in the creel set accordingly.

Eccentric beams and calender rolls can be indicated from the tension pattern of the yarn. The lost production of the warper creel usually results from package misalignment and worn guides or posts. A poor quality yarn may be caused in the warper creel by side variation of the tension ranges from end to end or full to empty supply package. These defects will show up as streaked effects in dyed piece goods.

Without good tension control at the warper more waste will be made at the slasher. This is true because of uneven beam runout. A well controlled tension at the warper is of vital importance.

## Loom Troubles

Improper tensions can cause varied troubles in the weaving operation. The zero point of the harness, when the sheds are crossing, subjects the yarn to considerable chafing action. This tension is critical. Tensions are also affected by the harness timing, the increase in the throw of the vibrator arm cam, the number of drop wire banks, the weight of drop wires and many other items. These points must come under close study for determination of the best settings. After establishment of these best settings for a given style of fabric on a particular loom, all similar looms should be standardized.

Fig. 3 shows examples of three loom-caused tension patterns. The top chart was made with improper setting of the whip roll and connector rod. The middle chart was made with an improperly set drop wire stand and worn warp beam journal. The peaks on the bottom chart are caused by a bad take-up roll.

Fig. 4 shows an example of the tension pattern made by weak springs in the Dwight Top. This also causes the harness to have too much bounce in the raised position.

(I)

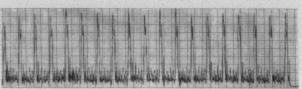


Fig. 4—This chart shows an example of the tension pattern made by weak springs in the Dwight Spring Top.

## Factors Influencing Warp Tension On The Loom

- (A) Part to Check for Variation in Warp Tension
  - (1) Manufacture of loom
  - (2) Model, width and improved parts
  - (3) Type of let-off and modifications
- (B) Bartlett, Draper or Roper Let-Off
  - (1) Number of teeth in ratchet
  - (2) Single or double pawl
  - (3) Number of teeth in beam pinion
  - (4) Diameter of beam (Has beam diameter been increased without changing let-off parts?)
- (C) Crompton & Knowles Precision Let-Off
  - (1) General condition—all parts working freely
  - (2) Type worm
  - (3) Position of weight stand
  - (4) Number of weight
- (D) Crompton & Knowles Full Automatic Let-Off
  - (1) Height and position of whip roll (parallel to beam)
  - (2) Poppets free
  - Cross loom connector (both ends working simultaneously)
  - (4) Position and condition of weight levers
  - (5) Setting of ratchet lever
  - (6) Condition of brakes on drive end and ratchet
  - (7) Condition of dash put and lever of oil
  - (8) No excessively worn parts
- (E) Whip Roll
  - (1) Anti-friction bearings or wooden bearings
  - (2) Diameter of whip roll
  - (3) Height and position of whip roll
  - (4) Whip roll arm extension
- (F) Drag Roll
  - (1) Single or double drag rolls
  - (2) Angle of drag roll (by number of notches)
  - (3) Height and position of drag rolls
  - (4) Drag roll extension
- (G) Drop Wire Bank
  - (1) Height and position of drop wire bank as measured from the floor and from the loom horn
  - (2) Number of banks of drop wires
  - (3) Weight of individual drop wires
- (H) Take-Up Motions
  - (2) High or low take-ups

(2) Type drive of take-up

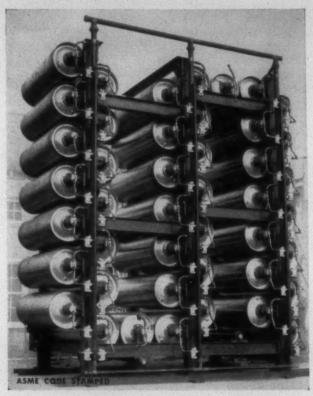
- (a) Pawl and ratchet (E-Model)
- (b) Worn drive from cam shaft
- (c) Drive from lay sword (C. & K.)
- (d) Pawl and ratchet type (Draper X-2, X-D series)
- (1) Take-Up Roll Covering
  - (1) Metal fillet
  - (2) Rubber, bulldog, crepe or traction
  - (3) Metalized
  - (4) Threading up system of cloth over take-up rolls
- (J) Cam shedding Motion
  - (1) Cams on camshaft
  - (2) Auxiliary camshaft
  - (3) Case-hardened or ball bearing treadle rolls
  - (4) Timing of harness (with shuttle in left or right hand box)
  - (5) Setting of arch in relation to lay on back center
  - (6) Notches stirrups set in
  - (7) Condition of roller top and spring
  - (8) Modification and condition of all parts
- (K) Dobby Head (For Draper Loom—Single or Double Index)
  - (1) Number of jacks
  - (2) Number of jacks used for harness and selvage
  - (3) Setting of hooks and knives
  - (4) Setting for division of head
  - (5) Setting on dobby crank arms
  - (6) Condition of all parts set for false motion or binding parts
- (L) Crompton & Knowles Head Motion
  - (1) Number of harness and head
  - (2) Rollers and tubes controlling harness
  - (3) Rollers and tubes controlling box motion
  - (4) Whether or not equipped with a multiplier for boxes or harness patterns
  - (5) Setting for eccentric gears—fast snapping motion for dense or woolen yarn; smooth, gentle opening and closing for delicate yarn
- (M) Type, Size, Dimensions of Harness and Harness Heddles
  - (1) Size of harness heddle
  - (2) Length and type of heddle
  - (3) Method of adjusting harness for free movement of heddles on harness
- (N) Jacquard Motion
  - (1) Single lift—close shed
  - (2) Double lift-double cylinder
  - (3) Settings and timings of jacquard head motion
  - (4) Condition of knives and hooks
  - (5) Number of cards in repeat of pattern
- (O) Production
  - (1) Picks per minute
  - (2) Total picks per shift
- (3) Number of teeth in motor pinion and friction gear. The above listings are only a small number of the items affecting warp tensions at the loom. We suggest that in your own particular mill you have a set-up card with the timing and setting for each style. Many mills where fancy cloth is woven have found this extremely useful.

Some \$14 million will be spent in the state of Tennessee during 1958-59 for the construction of facilities for the production of textile fibers.

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## Bleaching, Dyeing & Finishing

## Evaluation Of Carriers For Dacron Dyeing

By PETER J. SCOTT, President, The Tantatex Corp.

Some of the newer synthetics, such as Dacron, require a carrier when dyed in open equipment. In this paper, which is an abstract of a paper delivered by the author to the 1957 national convention of the American Association of Textile Chemists & Colorists, Mr. Scott outlines a method for evaluating carriers used in this respect.

POLYESTER fibers, such as Dacron and Terylene, are easily dyed with disperse dyes provided that dyeing temperatures are 250° F. or higher. High temperatures such as this require the use of pressurized equipment, which is not generally available, particularly where piece goods are concerned. In addition, high temperature dyeings are definitely limited by the nature of other fibers which may be present in blends in the fabrics.

The amount of dyes absorbed by the fabric at temperatures slightly greater than 200° is increased greatly, to almost the amount absorbed at 250°, by the use of chemicals known as carriers. Many types of non-pressurized equipment attain the necessary dyeing temperature (205°-208°) which, in turn, makes generally acceptable the carrier dyeing of polyester fibers.

Many chemicals are useful as carriers and also many proprietary products are currently offered to the industry. The following attempts to outline a method for the evaluation of two or more carriers. No effort has been made to evaluate specifically any of the numerous products on the market.

#### **Preliminary Screening**

Many carriers steam distill under the usual conditions of application. A toxic material that has a high boiling point may be as dangerous as one with a low boiling point. In most cases, the manufacturers' literature will supply the necessary information on toxicity. It is possible that toxicity alone can be sufficient cause to eliminate a carrier from further consideration since most of them cannot be considered completely non-toxic. A good ventilating system is absolutely necessary for carrier dyeing of all types.

The nature of the carrier may be detrimental to some fibers which are often found in blends with Dacron in fabrics. Certain phenolic carriers, for instance, degrade rayon acetate and therefore should not be used on Dacron and acetate blends. A useful indication is obtained by comparing the tensile strengths of goods kept at 205° F. for

three hours in water and in a ten-grams-per-liter carrier solution

Another sign of a useful carrier is that it should be no more difficult to apply than the dyestuff with which it is used. This is obvious in view of the costliness of dyeing time. If carrier application time materially adds to dyeing time, the added cost should be considered in the over-all evaluation. If the application of a carrier requires control operations that can be performed only by laboratory or supervisory personnel, its usefulness will be limited to very few dyehouses.

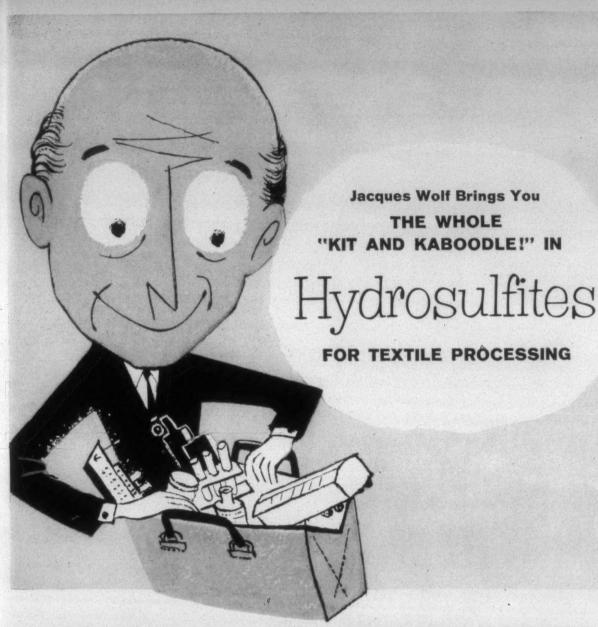
#### Carrier Evaluation Dyeings

A number of dyeings are necessary to determine the most important properties of a carrier after it has passed preliminary screening. An acceptable dyeing has an even, uniform and clear appearance. A carrier that produces spotty or uneven dyeings is not usable. An acceptable dyeing also has the required fastness to washing, crocking, light, dry cleaning, etc. A carrier may have a bad effect on the essential properties of a dyestuff. Of course, failure of a carrier to give acceptable fastness properties eliminates it from further consideration.

This leaves essentially only one variable, namely, the combined cost of carrier and dyestuff needed to obtain an acceptable dyeing of a given shade. Carriers, then, are suitably evaluated by preparing matching dyeings made under optimum conditions of carrier concentration and then comparing the costs of the matching dyeings.

Suppose, for example, that a standard shade is obtained on 100 pounds of Dacron fabric by the use of ten pounds of carrier Y and five pounds of dyestuffs at a cost of 50 cents and four dollars per pound, respectively. On the other hand, suppose that the same proportions of carrier Z and the dyestuff, at the same costs, show a considerably better color value. If the appearance and fastness properties of both dyeings are acceptable the difference in color can be determined in various ways.

Subsequent dyeings, attempting to match the shade with varying amounts of dyestuff and carrier, should be made. Reductions in the amount of carrier Z used may yield the standard shade and it would be unwise, economically, not to exhaust all the expensive dyestuff that this carrier can handle. It has been found that significant difference in color value cannot usually be matched by varying carrier concentration because: (1) a certain minimum of carrier must be used to obtain the required fastness results; (2) excessive amounts of carrier actually decrease color values; and



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HYDROSULFITE AWC (NaHSO<sub>2</sub> • CH<sub>2</sub>O • 2H<sub>2</sub>O) for application and discharge printing. Highest strength of Sodium Formaldehyde Sulphoxylate. For application printing of vat colors and for discharge printing. Also used for stripping.

HYDROZIN (Zn(HSO<sub>2</sub> • CH<sub>2</sub>O)<sub>2</sub>). Clear-dissolving, soluble Zinc Formaldehyde Sulphoxylate. For discharge printing on acetate dyed grounds. Also for stripping colors on wool, acetate, nylon.

<code>HYDROSULFITE BZ</code> (Zn • OH • HSO<sub>2</sub> • CH<sub>2</sub>O). Zinc Formaldehyde Sulphoxylate used for stripping wool stock, Shoddy and rags. INDIGOLITE discharge for indigo. Mixture of Leucotrope W and Hydrosulfite AWC in the proper proportions to give a white discharge on indigo-dyed grounds.

**LEUCOTROPE W (NaSO**<sub>3</sub> •  $C_6H_4$  •  $N(CH_3)_2OH$  •  $CH_2C_6H_4$  •  $O_3SNa$ ) discharge for indigo. Sulphonated quaternary base. For pure white discharges on indigo-dyed grounds when mixed with Hydrosulfite AWC. Also for discharging vat-dyed grounds.

**LEUCOTROPE 0** used with Hydrosulfite AWC to give an orange discharge on indigo-dyed grounds. Also for discharging vat-dyed grounds.

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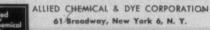
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#### BLEACHING, DYEING & FINISHING-

(3) color value differences between the two extremes are small. For comparative evaluations it is quite proper to use concentrations recommended by the manufacturer.

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#### **Production Conditions**

An advantage for making dyeing evaluations in the plant under actual operating conditions is that results are readily reproducible. This method also has a shortcoming in that when a match is made in the plant, the dyeing is stopped. For this reason factors such as temperatures and time of dyeing are not usually the same for any two dyeings. Shades may be matched on a beck with variations in dyestuff formulation as high as 7.5 per cent. Plant evaluations do consider the carrier's volatility and a match cannot be made if a large amount of the carrier is lost in this way.

It is quite evident that the modified phenol derivative carrier utilized more of the dye present in a series of carrier evaluation dyeings made according to laboratory procedure. The dyestuff combination chosen for the series was a brown consisting of:

	Lbs.	Cost/Lb.	Total Cost
Acetamine Yellow 4RL	1.8	3.14	5.65
Latyl Blue BG	1.3	7.67	9.97
Latyl Violet BN	1.4	2.18	3.05
Latyl Cerise B	1.5	5.03	7.55
Total Dyestuff	6.0	4.37	26.22

A blend of 50 per cent Dacron and viscose was used in the fabrics dyed in the series. The water-to-goods ratio was 20:1. All dyeings were run for three hours at 210° F. In all cases, the dyeing with the carrier to be evaluated was made simultaneously with a number of dyeings at the same and at decreasing dyestuff concentrations made with another

In addition to utilizing more of the dye present, the phenol derivative carrier gave more economical dyeings than modified solvent carriers, emulsifiable phenol solution carriers and solvent carriers. Because of its low cost, a modified solvent carrier was very close to a modified phenol derivative carrier. A much greater difference was noticed with the same carriers when 25 per cent of the dyestuff was withheld for two hours of dyeing time. This was done as a check on volatility.

#### Optimum Carrier Concentration

The most important property of a carrier is evaluated by matching a given shade at the lowest possible cost. This involves the use of a minimum amount of dyestuff and at the lowest carrier concentration that will give acceptable dyeings. This concentration is the optimum carrier concentration.

A tentative method to determine this is best described by a specific example. The optimum concentration of modified phenol derivative carrier W for dyeing a certain heavy brown is to be determined. The goods to be dyed are a blend of 50 per cent spun Dacron and 50 per cent viscose. It is known that the shade can be satisfactorily dyed with 12 per cent carrier W and six per cent dyestuff, both based on the weight of the Dacron present. Carrier W costs \$0.475 per pound. The dyestuff combination used was about \$4.30 per pound. The total dyeing cost was about \$31.50

per 100 pounds of Dacron.

The results indicate that the \$31.50 dyeings increase in depth of shade with the carrier concentration until ten per cent is reached. The depth of shade then remains about equal up to 14 per cent carrier concentration and then goes down as carrier concentration increases to 16 and 18 per cent. None of the carrier variations resulted in an improvement that approached what a ten per cent dyestuff addition achieved. It may be concluded that ten per cent is the minimum carrier concentration to be used for the particular shade.

A severe scour with two per cent sodium hydrosulfite and one per cent caustic soda did not affect the results significantly. With the exception of two dyeings which were somewhat uneven (four per cent and six per cent carrier concentration), the appearance of all dyeings was acceptable. Fastness to dry and wet crocking was acceptable for all dyeings. Fastness to laundering was best using 18 per cent carrier. Others were approximately equal except the four with lowest carrier percentages. A microscopic examination showed poor dyestuff penetration for the dyeing made with four per cent carrier, better dyestuff pentration for the dyeing with 12 per cent carrier, and good penetration for the dyeing made with 18 per cent carrier.

Final conclusions from this series of dyeings are: (1) 12 per cent carrier W is the minimum amount of carrier to be used for this shade and construction; (2) while the microscopic examination showed that penetration was not perfect, the fastness properties were acceptable; and (3) additional amounts of carrier will tend to improve both penetration and fastness properties. It is recognized that the validity of the tentative method given above suffers because the standard dyeing is chosen rather arbitrarily.

## Fabric Library Dedicated To William H. Harriss

"The William H. Harriss Collection of Modern Fabrics" was formally dedicated January 29 at the School of Textiles, North Carolina State College. Established as a tribute to 80-year-young Mr. Harriss by Cluett, Peabody & Co. Inc., the collection is made up of fabrics from all over the world. Speaking to those attending the inauguration, Mr. Harriss made the following comments.

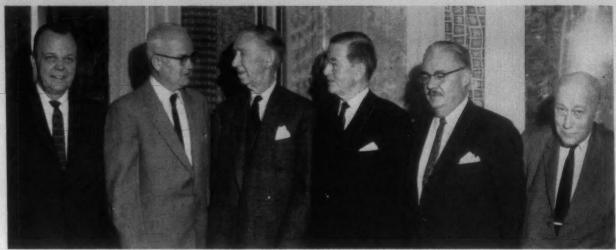
I CONTEND that the textile industry, throughout history, has never been given proper recognition comparable to that of other cultural efforts... the probable reason being man has lived too intimately with textiles down through the centuries. A potentate is never a hero to his valet. I also contend that a beautifully created fabric has as much appeal to the finer senses as the great paintings, sonatas, poems or other literary compositions. The textile art stands apart on its own as a separate cultural entity as much as the foregoing. Surely the textile arts antedate many of the others.

Yet, through the long years of history, to my mind, no proper recognition as such has been made of textile arts comparable to others—see the Louvre in Paris, The British Museum in London, The Metropolitan Museum of Art in New York, The National Art Galleries in Washington, and other such institutions and libraries scattered throughout the world. I recently noticed in the papers that your new North Carolina Museum of Arts, here in Raleigh, already has \$2 million worth of paintings and statues—but not a yard of fabric, although the textile industry is the largest in the state.

All through my business life, I have never been able to resist the temptation of collecting beautiful, unique examples of textiles and have long thought a constructive effort would be to accumulate here, on the campus of North Carolina State College, a collection of fabrics second-to-none in the world, to be housed in a magnificent edifice comparable to other world art buildings so that, in time, the textile people around the globe would beat a path to its door and it would become a veritable shrine for the textile industry and arts. Maybe this is too broad a concept, for to even start any movement looking to such a comprehensive end takes money, which I could not supply. So this idea has remained dormant as a cherished dream through the years.

But sometimes dreams begin to break through into reality. Last June Bob Dowling, head of our Sanforized Division, came into my office in New York to say that the company would like to present me with something worthwhile on my 80th birthday. How about a trip abroad, at the company's expense, and be entertained say, in London, by our office personnel there? This generous offer was indeed intriguing. However, I thanked Bob and told him that having lived out of the South for the past 50 years, I had already planned to have my 80th birthday among my kinfolk in North Carolina. He, being a good family man, appreciated my decision. So that was that!

However, Bob is not a man to quit on a job and a few weeks later I realized something was secretly brewing. This culminated in a splendid pre-birthday party for me at the Gotham Hotel in New York where some 40 of our Sanforized personnel were present. It was a glorious affair for me with fine presents galore. Bob knew of my dream of a fabric collection at the School of Textiles at State



Alford, Bostian, Harriss, Dowling, Campbell, Whittier

A number of old friends greeted William H. Harriss last month at North Carolina State College at dedication ceremonies for the William H. Harriss Collection of Modern Fabrics. The collection, featuring a variety of unique fabrics from all over the world, has been assembled by Cluett, Peabody & Co. Inc. as a tribute to Mr. Harriss on his 80th birthday. Shown with Mr. Harriss above are B. A. Alford, head of Cluett, Peabody's Sanforized licensee department; Cary H. Bostian, chancellor of North Carolina State College; R. M. Dowling, head of Cluett, Peabody's Sanforized Division; Dean Malcolm E. Campbell, School of Textiles, North Carolina State College; and Prof. B. L. Whittier, fabric development department, State College.

College. The great surprise of the evening was the presentation of a scroll to me announcing the establishment of a "Collection of Modern Fabrics" carrying my name in the School of Textiles here. Words cannot express my appreciation of this splendid undertaking and I am sure that Dean Campbell and other officials at State College will join me in sincere thanks to Sanforized.

After the decision was made to establish this collection of modern and unique fabrics, word went out to the various American and foreign representatives. Soon a veritable flood of fabrics began to arrive, and will continue, literally from the four corners of the earth. Students here will not have to go far afield to see the best in textiles. We will bring the mountains to Mecca!

The practical implications of this fabric collection are far-reaching. We all know too well that for the present the textile industry is in one of its repeated quiet cycles. It surely needs a "shot in the arm." The industry should be given more glamour to catch the public fancy. This collection of fabrics properly exploited could well be the primer to start more public interest in textiles resulting in better business for the industry. As a thought, we might select "The Fabric of the Year." At first we could use those fabrics produced by American mills and converters, later maybe including world producers. The fabrics could be selected each year by a proper award committee of prominent textile people.

Think what Winston Churchill, Ike Eisenhower and Grandma Moses have done to popularize painting. Everybody seems to be getting in the game and on with a picture. Many of the daubs I have observed around the country by some of the newly-initiated seem to result only in spoiling good canvas. That's all right with me—more power to them—they, at least, are giving more business to the canvas weaving mills. This painting renaissance has taken hold so well that even monkeys are now wielding paint brushes! Why can't we so glamourize textiles that soon they will be sewing their own garments!

It is my sincere hope and belief that this fabric collection will be accumulative as time passes and will redound to

the good of our textile industry and the School of Textiles at North Carolina State College. It has been a pleasure for me to return after all these years, not empty handed, but with this splendid gift from my company.

#### Dr. Stephen J. Kennedy To Receive Medal

The American Society for Testing Materials Committee D-13 on Textile Materials will present the Harold De Witt Smith Memorial Medal to Dr. Stephen J. Kennedy, research director, textile, clothing and footwear division, Quartermaster Research and Development Center, Natick, Mass. The presentation will be made on Thursday, March 20, during the committee's Spring meeting March 18-21 at the Sheraton-Park Hotel, Washington, D. C. The medal is a testimonial to the memory of the late Harold De Witt Smith who pioneered in the concept of an engineering approach to the evaluation of the properties of textile fibers and to their utilization. It was endowed by Fabric Research Laboratories Inc., Boston, Mass., and is awarded at intervals of not less than one year by the committee for outstanding achievement in research on fibers and their utilization. This is the ninth time the medal has been awarded.

Dr. Kennedy holds a B.A. degree from the University of Illinois and the degrees of M.A. and Ph.D. from Columbia University. He served as director of market research for Pacific Mills from 1935 until 1941. His service with the Quartermaster Corps began in 1942 when, as Lt. Colonel, U. S. Army, he became chief of the textile section, research and development branch, military planning division, O.Q. M.G. In this capacity he initiated the program of research and development which enlisted the aid of the textile industry in designing and developing improved clothing and shelter for U. S. soldiers. For his wartime accomplishments he was cited for the Legion of Merit.

Dr. Kennedy is a member of the American Economic Association, The Textile Institute (England), American Association of Textile Chemists & Colorists, Textile Research Institute, American Chemical Society and Phi Beta Kappa. He is also the author of several publications relating to the textile industry.

## Maintenance, Engineering & Handling

## Starting And Maintenance Of Range Drives

By C. L. GRIFFIN, General Electric Co., Schenectady, N. Y.

There are a few right ways and any number of wrong ways to handle each operation in the mill. That includes the initial start-up and maintenance of range drives, as pointed out in this paper presented at the Conference on Electrical Equipment for the Textile Industry at North Carolina State College.

PLANNING the initial start-up and maintenance of range drives is more than a necessary evil. Initial start-up and maintenance are positive and productive factors in mill profits. Planned initial starting and maintenance procedures require a minimum expenditure of time, money and effort. For example, if the start-up is planned properly, the job can be done quicker with less manpower. Likewise, if maintenance is practiced on a planned basis, a fairly constant work load can be obtained permitting the mill to estimate manpower requirements accurately. If the electric equipment is properly installed and well maintained, longer equipment life can be realized with a minimum of cost.

Planned initial start-ups and good maintenance reduce down-time and result in more production from each machine. By substituting planned shutdowns for unscheduled breakdowns of uncertain duration and seriousness actual down-time is reduced. Added output can be obtained without adding more ranges.

Experience has shown that a well organized initial starting procedure, including appropriate precautions to minimize damage to the equipment, will reduce the over-all time and expense required for initial starting and adjustment. It will also reduce the possibility of overlooking an inspection or operational step necessary for safe, efficient initial starting.

A thorough understanding of the drive operating requirements and functions, as well as a thorough understanding of the sequence of operation of the control system, is necessary in order to plan the initial starting procedure and before any actual adjustments can be made. Instruction books provided with the equipment are of assistance in

obtaining this understanding and also provide detailed information on all of the drive components.

After the drive equipment is installed, there are several basic steps that should be carried out to insure optimum performance and minimum future maintenance: (1) check the alignment and balance of all rotating equipment such as M-G sets, motors and tachometers; (2) measure the insulation resistance of the rotating equipment and wiring; (3) check of interconnecting wiring against the diagram furnished with the drive; (4) check the control sequence; (5) check rotation, speed and speed range of the motors while they are uncoupled from the ranges; (6) make a final control check and record the resultant settings including exciter voltage, motor field voltage and generator field voltage with the speed adjusting rheostat at minimum, half and maximum speed positions; (7) check the driven machine to be sure it is ready for operation; and (6) start the range and make any required final drive adjustments.

Most of these checks are routine; however, some of them are worthy of emphasis. Good alignment and balance of all rotating equipment are essential to long and trouble-free operation. Flexible couplings must be aligned with the same care that is so essential with solid couplings. Bearings may be damaged and shafts may be broken after a few weeks or months of operation, when out of alignment.

#### Commutation Important

Good commutation on d.c. machines is equally important. Fundamental for successful commutation is continuous contact between the commutator and the brushes. The commutator must be in good condition, the machine in good balance, the brushes properly secured in the correct position and free to move up and down in the brush holders. Particularly at the initial start-up, commutation should be watched carefully under all operating conditions.

Accurate data taken and recorded throughout the initial start-up are essential. Such records will aid you in any future trouble-shooting that may be required. These records enable you to compare future data with the original data

to determine maintenance requirements. There is no substitute for complete, accurate data.

#### Maintenance

After the range is started, the capital investment can be protected by using good maintenance practices. Since we cannot cover the maintenance of each specific machine and device used on a range in detail in this space, a brief picture of maintenance in general will be presented.

Productive maintenance is being accepted and practiced by more and more mills every year. Productive maintenance is not new. Basically, it is simply a means of controlling electrical system outages through the planned application of men, material and tools to help protect capital investment, increase production and lower product costs. What is new is the organization of this data into a simple sequence of steps: (1) gather complete equipment data; (2) determine the extent of routine maintenance; (3) establish a routine operating-control system; (4) evaluate for critical maintenance; and (5) establish a critical maintenance program.

#### Gather Complete Equipment Data

Go through the finishing department and record on separate file cards a description of the equipment application, rating, serial number, manufacturer, vendor or agent, purchase order number, cost and machine equipment number. Space should also be provided for recording the original location of the unit and all subsequent changes and the original and installation costs. These record cards will form a basis for controlling inspection and maintenance costs and will fill a fundamental need to know what you have in your mill, where it is and what it does.

#### Determine Extent Of Maintenance

Select equipment to be covered by the productive maintenance program. Analyze all equipment from the standpoint of importance of operations. Include only those items on which productive maintenance will pay. The objective here is to determine—not the greatest—but the best or most desirable amount of routine maintenance required for the electrical system. In some cases, it is less costly to replace or repair a part after it wears out, than to apply productive maintenance. As an example of this thinking, if several operations depend on a single range, the need for productive maintenance is more essential than if the load of this range can be picked up elsewhere.

The equipment records developed in Step 1 will form the framework of an operating-control system. Determine the operating cycle performed by each piece of apparatus covered in the maintenance plan. Arrange the inspection cycle according to need and experience. Concurrently, a work program for routine maintenance must be developed. Organize the maintenance schedules to reduce the number of urgent orders.

This task consists of setting up an inspection program that strikes a balance between "too often," with resultant waste of money, and "not often enough," with possible damaging outages that can occur. The mechanics of carrying out the routine maintenance program are set up in

this step and with them the proper scheduling of men and materials can be accomplished easily.

Organize a list of critical equipment. Work with the plant production department to find out how vital each piece of equipment is to production. Set up the list in order of critical importance. Inspect this critical equipment to determine its condition and then set up a plan for future inspections. Balance the cost of the breakdowns for each piece of equipment against the cost of stocking new units or parts. Also, project overhaul needs of equipment to constantly upgrade its condition. This information will enable you to determine the best protection against loss of production for the least cost.

The critical importance of each piece of electrical equipment and its condition is now known. The next objective is to find what spare parts or units should be stocked as insurance to protect highly critical equipment. To accomplish this one must, first, decide which parts are most subject to failure. Next, estimate repair time under the following conditions assuming a major failure: (1) no major parts stocked; (2) some major parts stocked; (3) all major parts stocked; and (4) complete unit stocked. Determine down-time costs due to loss of production for each of the alternative conditions. Determine cost or repair and spare parts inventory for each of the alternative conditions. Total this information to determine the total failure cost. Analyze total cost for each condition. This will help on the determination of what must be stocked to protect the investment.

#### Critical Maintenance Program

Set aside a budget to stock the critical renewal parts which minimize costs of down-time. Work out a rigid schedule for this inspection and maintenance attention devoted to critical equipment. Plan major overhauls for the range equipment on a long-time basis. In this way, advantage can be taken of planned shut-downs to keep down-time costs low. Overhaul should not be thought of by machine but rather by manufacturing operation. One of the main objectives of the planned overhaul program is to determine the average life of the rotating machine windings and rewind or replace these machines at a predetermined number of years.

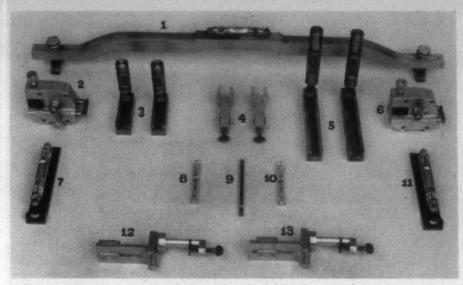
#### Results Of Program

More production from each machine will result from the maintenance program. By substituting planned shutdowns for unscheduled breakdowns, the actual down-time of each machine is reduced. Added output is achieved without adding more machines.

More production from a smoother work-flow is another result of the program. In today's integrated operations, a breakdown in one range may affect others. Routine maintenance and planned shutdowns reduce breakdowns to a minimum. Processes operate on schedule at their maximum

Planned overhaul allows increased maintenance budget effectiveness. A productive maintenance program will help balance work loads more efficiently, reduce delays in dispatching and obtain savings in maintenance, labor and materials. Extra shift and overtime maintenance will be reduced. Budget effectiveness is increased and closer cost control is obtained.

In many mills there is a tendency on the part of the



#### PICTURED ABOVE

(1) Two Cross Levels. (2 & 6) Wire Wheels. (3) Height Gages. (4) Two End Holders. (5) Two Height Gages for Roving & Twisting. (7 & 11) 6" Machinist Levels. (8 & 10) Two Line Levels, (9) Stand Gage. (12 & 13) Reel Holders. Not shown-Twelve Roll Racks.

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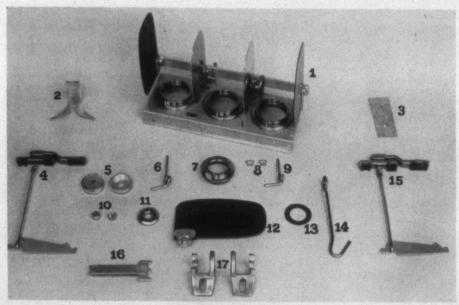
reduce operating costs



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PICTURED ABOVE

(1) Alum'n. Ring Parts, Alum'n. Ring Holder, Alum'n. & Fiber Separator Blades and New Type Traveler Cleaner. (2) Balloon Breaker for Spoolers & Winders. (3) Protective Cap to keep dirt and lint out of Roll Stand. (4 & 15) New Type "Foolproof" Weight Lever. (5) Cap to repair Pneumafil Flutes. (6 & 9) Thread Guides. (7) Alum'n. & Cast Iron Ring Holder, with New Type Traveler Cleaner. (8) New Type Traveler Cleaner & Screw. (10) Reed Caps. (11) Tension Disc Wnder. (12) Cloth Fiber Separator Blade. (13) Steel Washer with abrasive on it for Spindle Base. (14) Weight Hook. (16) Darby Loops. (17) Bar Brackets.

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managers to dismiss maintenance as an expense rather than to accept it as profitable productive investment of time and money. It is regarded as an unfortunate necessity and an essentially unprofitable activity. Many persist in thinking that the way to minimize maintenance expense is to operate on the assumption that if you ignore potential trouble it will become discouraged and will go away.

The answer for today and tomorrow cannot be found in the old philosophy of maintenance: an oil can, a wrench and a screwdriver. As production equipment has grown in engineering content, so must maintenance follow the same path to take advantage of the most highly skilled engineering. In many cases the engineering approach costs less money. If not, the question, is greater production continuity worth the added cost of applying productive maintenance, remains.

One mill has claimed to be able to schedule 80 per cent of the maintenance work required. In a relatively short period of time their maintenance labor has been reduced more than 50 per cent. At our own General Electric, Johnson City Aircraft Plant, the plant engineer decided to install a productive maintenance program in the Fall of 1954. In 1955, with the same maintenance budget and manpower, he reduced machine down-time 45 per cent. This plant might be considered reasonably representative of many mills having single purpose machines as well as continuous operations.

In conclusion, remember, you can effectively increase the results of maintenance in your mill if you follow the five basic steps which are: (1) gather complete equipment data; (2) determine the extent of routine maintenance; (3) establish a routine operating-control system; (4) evaluate for critical maintenance; and (5) establish a critical maintenance program. Schedule the work, train maintenance men to make inspections and repairs to meet your needs, and, above all, remember it's poor business to consider maintenance a neutral or negative factor. Consider it a positive and productive factor in mill profits.

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Promotions, Resignations, Honors,
Promotions, Appointments, Elections,
Transfers, Appointments, Activities
Civic and Associational Activities

### PERSONAL NEWS



J. B. Harris Jr.

John B. Harris Jr., vice-president of Greenwood (S. C.) Mills, has been elected a director and a member of the finance committee of the State Bank & Trust Co. at Greenwood. Mr. Harris, whose father is chairman of Greenwood Mills' board of

directors, is a graduate of Clemson College and the Harvard University Graduate School of Business Administration. He was named assistant vice-president of Greenwood Mills in 1948, and vice-president in 1956. He is a member of the board of directors of both Greenwood Mills and Greenwood Mills Inc., the firm's New York sales agent. A Rotarian, he is currently serving as president of the Greenwood Rotary Club.

Minot Milliken has been elected a director of Pacolet (S. C.) Mfg. Co., succeeding Walter S. Montgomery, Spartanburg, S. C., who resigned. Other directors and all officers were re-elected.

S. Harris Caldwell has been appointed general manager of Berryton (Ga.) Mills Inc. Controlling interest in the mill was recently bought by Henderson (N, C.) Cotton Mills. Mr. Caldwell, a graduate of North Carolina State College, was formerly

connected with the Henderson Cotton Mill for eight years. Prior to that he was with the Goodyear Tire & Rubber Co. at Cedartown, Ga., for six years.

Phil Webb has been promoted to overseer of wool carding and spinning of the Hillside Mill of Callaway Mills Co.'s Hillcrest Division, Manchester, Ga. A graduate of Georgia Tech, he received a B. S. degree in textiles and an M. S. degree in industrial management. A member of the American Association of Textile Chemists & Colorists, he joined the company in 1954.



A. U. Priester

A. U. (Buck) Priester Jr., a 1932 graduate of the Clemson School of Textiles, has been elected vice-president of the Clemson Alumni Association. Mr. Priester is vice-president of Callaway Mills Co. at LaGrange, Ga., and manager of the Hill-

crest Division, which operates four textile manufacturing plants in LaGrange and Manchester, Ga.

Several management organizational changes have been announced by Cone Mills Corp., Greensboro, N. C. . . . Percy C. Gregory Jr. of Greenville, S. C., a vice-president of Cone Mills Corp., will take

over the general supervision and responsibility of Carlisle (S. C.) Finishing Co. in addition to his current responsibility for Union Bleachery at Greenville. . . . Edward E. Jones, former executive vice-president of USF Aspinook Finishing Division of Gera Corp., Norwich, Conn., has been named general manager of Carlisle. . . . Leonard England, production manager at Union Bleachery, has been made manager of that plant. . . . Marshall Gardner, assistant vicepresident and formerly manager of the company's Proximity Print Works Plant, Greensboro, has assumed general supervision of the company's operations at Proximity Print Works and at Granite Plant, Haw River, N. C.

W. E. Simmons has been named manager of Amerotron Corp.'s Honea Path, S. C., division, succeeding J. O. Bishop, who has resigned.

Several organizational changes have been announced at Excelsior Mills, Clemson, S. C. . . Ralph Gillespie has been promoted to products manager. . . Claude Marchbanks will replace Mr. Gillespie as superintendent of Clemson Fabrics. . . Ralph McKnight, assistant overseer in the treating division, has been transferred to the same post in Clemson Fabrics. . . John Brandt has been transferred to the special products department of Clemson fabrics. . . Furman Cox, master mechanic at the plant, has been named plant engineer.



W. A. Kennedy

Woodford A. Kennedy, founder and president of WAK Industries, Charlotte, N. C., manufacturer of counters for the textile industry, was recently presented a Distinguished Service Award by the Charlotte Engineers Club. The award was given in

recognition of Mr. Kennedy's "achievements in advancing the profession of engineering an unusual service" to the club and to Charlotte at large. The award described Mr. Kennedy as "sponsor and tireless advocate of Charlotte College."

Harold H. McGee has been named vicepresident in charge of customer relations for Texize Chemicals Inc., Greenville, S. manufacturer of textile chemicals. Mr. McGee was one of the first employees of Texize upon its organization in 1946. He joined Texize as a sales representative even before the manufacturing plant was in operation. He was the firm's original representative introducing commercial cleaning products to the textile industry. In 1947 he was transferred to the consumer products field. Mr. McGee was named sales manager for the household products division of Texize in 1950 and in 1956 became general manager for the Tru-Way consumer products division.

Emory G. Orahood has been named Southeast regional sales manager covering the Atlanta, Charlotte and Birmingham districts of the Reliance Electric & Engineering Co., Cleveland, Ohio. Mr. Orahood, whose headquarters are in Atlanta, has been manager of the company's Atlanta district since 1949. A graduate of Clemson College in 1943, he joined Reliance after serving three and a half years in the Navy.



M. H. Crieghton

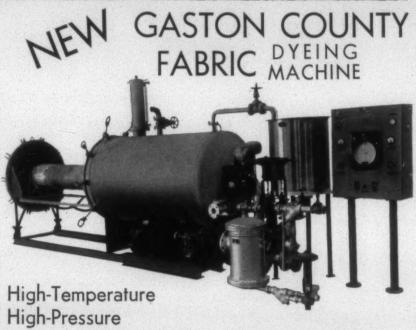
M. H. Creighton has been named sales manager and North Carolina representative for the Jenkins Metal Shops Inc., Gastonia, N. C. Mr. Creighton attended Clemson College and the University of Georgia. His headquarters will be in Gastonia at the

company's plants. Jenkins manufactures and rebuilds card screens, spinning cylinders and other repair parts for the textile industry.

Malcolm MacLeod of Westwood, Mass., has been appointed to the position of technical service representative for Stowe-Woodward Inc., Newton Upper Falls, Mass. Mr. MacLeod attended Northeastern University School of Mechanical Engineering. He has been associated with Stowe-Woodward for 11 years.

George J. Zahringer Jr. has been appointed manager of market research for Zefran, new textile fiber of the Dow Chemical Co. Mr. Zahringer, who has been with Dow for seven years, will supervise and coordinate market research studies for the textile fibers department, Warwick, Va., in such areas as fiber end-use applications: current market and fashion conditions and apparel trends; and the competitive fiber and fabric situation at all levels in the textile industry. He was formerly a sales supervisor in the company's solvents sales group and more recently in purchase analysis at Dow's home office in Midland, Mich. . Andrew J. Lazarus has been named manager of product information service for Zefran. He will supervise the dissemination of news and information about the product and textile fibers department. He was formerly with the Dow public relations department in Midland. . . . Jane O'Leary Harvey has been appointed fashion co-ordinator for Zefran. Mrs. Harvey's headquarters will be in Dow's New York City office. For four years she was fashion promotion director of the Wool Bureau. Prior to that she was fashion co-ordinator for the resident buying office of McGreevey, Werring & Howell.

Carter L. Burgess has been elected president of American Machine & Foundry Co. Mr. Burgess was formerly president of Trans World Airlines. From 1954 to 1956, he served as Assistant Secretary of Defense for manpower and personnel. For his services he received the Defense Department's highest civilian award, the Certificate of Appreciation. Prior to his appointment as Assistant Secretary of Defense, Mr. Bur-



This machine is designed to dye open-width woven fabrics made of synthetic fibers and blends of natural and synthetic fibers that require high temperature-high pressure procedures for good dyeing results. Certain synthetic fabrics are HEAT SET during dyeing thus eliminating an additional process for this purpose.

Machine can be supplied with one-way or two-way flow according to customer specifications.

Machine capacity is for cloth up to 120" wide and up to 2,500 yards in length.

#### OUTSTANDING **NEW** FEATURES

AUTOMATIC HEATING AND COOLING—The exchanger is equipped with automatic steam and water valves so that the temperature controller maintains temperature

STATIC PRESSURE CHAMBER—Compressed air is injected into dyeing vessel to provide a static pressure cushion which allows the dye pump to maintain a conprovide a stant flow

RUNNING WASH SYSTEM—Clean water is fed to the dye pump from the expansion tank through large pipe line. The wash water is forced thru the dye beam and exhausted to drain sewer.

hausted to drain sewer.

COMPLETELY AUTOMATIC FLOW CONTROL—Desired dyeing pressure is pre-set on control panel, pump is started and pressure is then maintained at set point throughout the entire dyeing cycle. Flow control valve is always closed when dye pump is not running and it is also closed during reversal periods. The valve closes slowly before the flow is reversed from 'outside-in' to 'inside-out' or vice versa, by the 4-way reversing valve. After the flow is reversed the flow control valve opens slowly. This eliminates surges which disturb the position of the cloth on the dye beam.

AUTOMATIC BEAM REVOLVING DEVICE—The dye beam is revolved by a constant speed driving mechanism and this assures even penetration during the scouring and dyeing cycles. This feature minimizes shading and produces level dyeing from end to end of the dye beam.

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gess was assistant to the president of the University of South Carolina. He served from 1947 to 1953 as assistant to the president and director of administration of the General Aniline & Film Corp. From 1946 to 1947, Mr. Burgess was assistant to the president of Trans World Airlines.



Dr. I. W. Luthy

Dr. J. W. Luthy has been appointed director of applications for the dyestuff and chemical divisions of Sandoz Inc. In the new post he will be responsible for all research and development, including customer service on technical problems of the

wide variety of uses for the products of the two divisions. Dr. Luthy joined Sandoz in 1948 as a chemist in the company's Fair Lawn, N. J., works.

Vice-presidents Kenneth H. Klipstein and George R. Martin have been elected to the newly created office of executive vice-president of American Cyanamid Co. . . Mr. Klipstein, who joined Cyanamid in 1933, became a vice-president and director in 1957. . . Mr. Martin joined American Cyanamid in 1927 to organize a legal department, and served as its head until 1951. He has been a member of the board

of directors since 1928, and a vice-president for 13 years.

S. M. (Mims) Harrison, executive vicepresident of Echota Cotton Mills in Calhoun, Ga., was recently installed as the president of the Northwest Georgia Council, Boy Scouts of America.

Estelle M. Tennis, executive director of The Color Association of the U. S., retired on February 1. Miss Tennis had been with the association for 29 years, having succeeded Margaret Hayden Rorke as executive director in 1954. Miss Tennis is a native of California and will return there to reside permanently in Oakland. She is a graduate of the University of California. . . . Midge Wilson, who is Miss Tennis' assistant, has been selected by the board to suc-

ceed her as executive director of the association. Miss Wilson has spent many years in fashion work and was active in merchandising circles in the textile field.

Howard S. Millsaps, industrial engineer at Elberton (Ga.) Mills division of United Merchants & Manufacturers Inc., has been assigned to work at a cotton mill in Teheran. United Merchants has a contract with the Iranian government to furnish technical supervisors for the mill.

Thomas G. Gibian has been named general manager of the organic chemicals division, Dewey & Almy Chemical Co., Cambridge, Mass., a division of W. R. Grace & Co. Mr. Gibian succeeds Russell L. Haden, who has joined the Virginia-Carolina Chemical Corp. Mr. Gibian will also continue his responsibilities as general manager of the firm's battery separator division. A graduate of the University of North Carolina with a B. S. degree and the Carnegie Institute of Technology with a Ph. D., Mr. Gibian joined Dewey & Almy in 1951 as a development engineer after serving as a research chemist with the Atlantic Refining Co.



Harold J. Johnston

Harold J. Johnson has been appointed assistant general manager in charge of research and development for Denman Textile Rubber Co., Cuyahoga Falls, Ohio. For the past two years, Mr. Johnson has been conducting special studies in the textile field for

U. S. Rubber Co. Prior to that he was associated with the Gates Rubber Co., Denver, Colo., for 15 years.

Samuel B. McFarlane Jr. has been appointed technical director and elected vice-president of the Onyx Oil & Chemical Co. Mr. McFarlane has been with the Celanese Corp. of America for 17 years. His last position was manager of the Central Research Laboratories in Summit, N. J. In his new position with Onyx, Mr. McFarlane will be responsible for planning and execution of the company's research projects as well as for all other technical functions concerning product development.

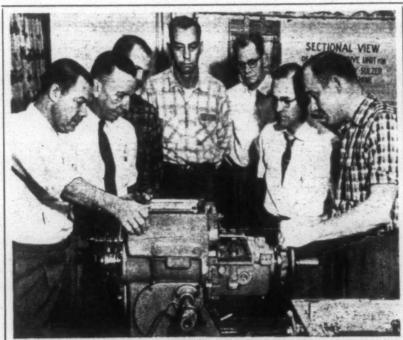


Stephen Nye

Stephen Nye has been promoted to the new-ly-created post of manager of the Southern textile application laboratories of the Warwick Chemical Division, Sun Chemical Corp., Long Island City, N. Y. Mr. Nye will be located at the Rock Hill, S.

C., plant of the company where he will provide on-the-spot technical services on application problems to augment the company's expanded textile chemicals program. A graduate of Rhode Island University, Mr. Nye has had over 20 years experience in the textile field. He joined Warwick Chemical in 1953 as manager of the company's application laboratory in Wood River Junction, Rhode Island. He is a member of the American Association of Textile Chemists & Colorists.

Carnegie Institute of Technology, Pittsburgh, Pa., has announced the appointment of Dr. Jules Labarthe as professor of textile technology. A distinguished lecturer and writer, Dr. Labarthe for the past 27 years has been Senior Fellow on the Commodity Standards Fellowship maintained at Mellon Institute by the Kaufmann Department Stores of Pittsburgh. He is chairman of the American Standards Association Committee L-14 on Textile Test Methods and has been active in the textile performance standards developed by the L-22 and L-24 committees. He holds memberships in the American Chemical Society, American



Scruggs, Fletcher, Cooke, King, Caylor, Knight, Strugar

REPRESENTING FIVE DIFFERENT COLLEGES, these associate professors and technicians are receiving a one-week indoctrination and training course on weaving machine service and maintenance at the Textile Machinery Service School of The Warner & Swasey Co. in Cleveland, Ohio. Each of the colleges was a recent recipient of a Warner & Swasey-Sulser weaving machine. Being instructed on the operation of the picking unit by George H. Strugar, Warner & Swasey-service engineer, are Haden E. Scruggs, Institute of Textile Technology; Gerald B. Fletcher, Georgia Institute of Technology; Cecil Cooke, also of I.T.T.; L. B. King, Clemson College; O. A. Caylor, University of Chattanooga; and W. C. Knight, Alabama Polytechnic

Association of Textile Chemists & Colorists, American Standards Association and the American Association of Textile Technology. He is a member of the Textile Research Institute, and was a member of the board of directors of the Research Institute, Princeton University, from 1947 to 1955.

Clifford F. Nelson Jr. has been promoted to the position of manager of the bleachery division of Thomaston (Ga.) Mills. Mr. Nelson joined the company in 1935 following his graduation from Georgia Institute of Technology where he received a B. S. degree in chemical engineering. He previously held the position of assistant manager of the division.



F. I. Campbell

Forrest J. Campbell has been appointed to the sales personnel of Howard Brothers Mfg. Co., Worcester, Mass., manufacturer of card clothing, napper clothing and hand stripping cards. Mr. Campbell will devote his sales efforts primarily to the cotton

and synthetic mills in South Carolina and parts of Georgia and Tennessee. He will make his headquarters at the company's new branch, 12 Wade Hampton Boulevard, Greenville, S. C.

Gerald K. Lake of the new products development branch, industrial fabrics division of Burlington Mills, has been elected

president of the American Association for Textile Technology.



E. Taylor Mobley

E. Taylor Mobley has been appointed manager of the Southern district of Ciba Co. Inc., New York City, following the retirement of Sam L. Hayes. Mr. Mobley attended Furman University in Greenville, S. C. For four years he worked as an oil chemist in

the area. From 1929 until 1948 he was connected with General Dyestuff Corp. as dye and chemical sales representative. Mr. Mobley joined Ciba's division in Charlotte in 1949 and since that time has represented the company in calling on textile dyeing and finishing plants in the territory. He is a member of the American Association of Textile Chemists & Colorists and for years has participated in the activities of its Piedmont Section.

W. C. Arial Jr., superintendent of the Woodruff, S. C., plant of Reeves Brothers Inc., has been elected president of the Woodruff Chamber of Commerce.

Franklin M. Soling, a graduate of the North Carolina State College School of Textiles, has joined the merchandising division of Industrial Rayon Corp. Mr. Soling will make his headquarters in the company's New York office and will supplement the division's current activities related to fabric

design and development for the apparel and decorative fields. Prior to joining Industrial Rayon, Mr. Soling was with the market development department of American Viscose Corp. and was associated in a fabric design capacity with Amerotron and Fame Fabrics.

Robert S. Small, vice-president of Woodside Mills, Greenville, S. C., has been elected a director of Piedmont Natural Gas Co. to succeed the late Fred W. Symmes.

Louis W. Jander has been promoted from Eastern regional sales manager of Yale materials handling division of The Yale & Towne Mfg. Co. to assistant general sales manager. . . James Rainey, district sales manager for the division in the South Central U. S., has been promoted to Midwest regional sales manager.



Bert Howarth

J. Bertrum (Bert)
Howarth has been appointed representative covering North and South Carolina for Cotton, McCauley & Co. Inc., textile sales agency with head quarters in Pawtucket, R. I. Mr. Howarth will handle the products of Machinecraft

Inc. He has been affiliated with Universal Winding Co. for the past 21 years, first working out of its Atlanta office covering Georgia, Alabama and Tennessee. In 1955 he was transferred to the New England

#### 20th

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Greenville, South Carolina

"An institution of the Textile Industry since 1915"

area and in 1956 returned to Charlotte. N. C., where he worked the Southern terri-



Charles T. Cooper

Charles T. Cooper has been named assistant superintendent of the Dalton. Ga., plant of the American Thread Co. Mr. Cooper joined American Thread in 1950 in time study and job standards work where he remained until 1953. He was then made fore-

man in the spinning department. In June 1955, he was transferred to the preparation department where he obtained technical experience for several months. He was then placed in charge of the laboratory, supervising all testing done at the plant, as well as some special testing done for other Georgia mills.

Richard P. Newell has been named manager of the export division of Saco-Lowell Shops. Biddeford, Me., succeeding J. M. Walker, who has retired. Mr. Newell has been assistant manager of the division since 1954. For nine years previous to that he served as foreign sales agent for the Draper Corp. A graduate of the University of Massachusetts, he studied textiles at the Rhode Island School of Design. Over the past 15 years, he has traveled throughout Europe. South America, Central America, Africa and the Far East. H. Mahlon Dolby will succeed Mr. Newell as assistant of the division.

Donald C. Issing and Norman J. Clark have been named sales promotional representatives of the textile chemicals department of the organic chemicals division of American Cyanamid Co. Mr. Issing, a graduate of Gettysburg College, in Gettysburg, Pa., was formerly with Edwards Shoes Inc.

of Philadelphia. Prior to that he was associated with both the B. F. Goodrich Co. and U. S. Rubber Co. Mr. Clark is a graduate of Manhattan College in Riverdale. N. Y. He was formerly associated in sales capacities with P. Ballantine & Sons. General Service Publishing Co. and Meredith Publishing Co. Both men will make their headquarters in New York City.

At the annual meeting of The Association of Cotton Textile Merchants of New York, held recently, the following directors were elected. For three-year terms; John Howland of Woodward, Baldwin & Co. Inc.; Frank Leslie of Leslie. Catlin & Co.; Joseph H. Sutherland of J. P. Stevens & Co. Inc.; and Robert D. Williams Jr. of Callaway Mills Co. For a two-year term: Stanley Phillips of Cannon Mills Co.

#### OBITUARIES

Ernest K. Halbach, 74: president of Verona-Pharma Chemical Corp., Union. N. J., died January 24 at his home in Short Hills, N. J. Mr. Halbach had been connected with the dyestuffs field for 58 years and formerly was president of General Dyestuff Co., division of General Aniline & Film Corp.

Ellis Murray Johnston, 74, retired textile executive, died January 19 at his home in Greenville, S. C. Mr. Johnston was named treasurer of Woodside Mills in 1930. Subsequently he was elected president and served both as president and treasurer until 1937 when he was named chairman of the board, He continued as board chairman until his retirement in 1939. Surviving are his wife, a son, a sister and a brother.

W. A. (Bill) Julian, 63, former head of the cotton buying department of Burlington Industries and Pacific Mills, died January 16 in Gastonia. N. C. Mr. Julian served

in the cotton textile business for 50 years. He was connected with Loray Mills (now Firestone Textiles) and Sumner Cotton Co., and had served as vice-president and a director of Ozark Mills and a director of United Spinners Corp., Lowell, N. C.

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Frank David Lockman, 73, superintendent of the Lockhart (S. C.) Plant of Deering, Milliken for many years, died January 21 in Laurens County (S. C.) Hospital. Mr. Lockman joined Clinton Mills after his association with Deering, Milliken and later went with Union Buffalo Mills Division of United Merchants & Mfrs. at Buffalo, S. C.

Claude S. Morris, 89, retired vice-president and member of the board of Cone Mills Corp., Greensboro, N. C., died last month at his home in Salisbury. He was the father of Lewis S. Morris, secretary of Cone Mills, and Stedman Morris, manager of Cone's Salisbury, N. C., plant. Mr. Morris had been in declining health for several. years and seriously ill for two weeks. A native of Troy, N. C., Mr. Morris was with the Worth Mfg. Co., Worthville and Central Falls, N. C., before joining Cone Mills in 1903. Mr. Morris became plant manager of Salisbury Cotton Mills in 1905 and was elected its president in 1920. In 1951, when the Salisbury Mills merged with Cone Mills. Mr. Morris became a vice-president. He served as vice-president and member of the board until his retirement in 1953. Surviving are his widow, two sons, two brothers and a sister.

Ralph Arthur Rhodes, 42, vice-president of the Bigelow-Sanford Carpet Co. Inc., Thompsonville, Conn., died last month in Chicago, Ill., while attending a trade meeting. Mr. Rhodes founded the Georgia Rug Mill, Summerville, Ga., in 1946 and was one of the pioneers in the tufted rug industry. The mill was sold to Bigelow-Sanford in 1950 and Mr. Rhodes became a vice-president of the company last May. Survivors include his widow and two sisters.

## CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

OPP, ALA.—A new \$50,000 addition to Opp Cotton Mills plant here is expected to be completed about the end of March. It will provide 14,800 square feet of additional space, which will be used for a cutting room and for additional machines. The addition will be constructed of masonry and steel and will have concrete floors. The sprinkling system in the main plant will be extended into the new portion. A new parking area has also been added to the plant.

GAFFNEY, S. C.—Gaffney Mfg. Co. here showed a net profit of \$263,629 for the 52 weeks ended December 1, 1957. The 1956 net for a 53-week period was \$187,101. Dividends of \$200,000 or \$12.50 per share were paid by the firm. Some \$5,066,405 in earned surplus was reported as of December 1, 1957, compared with \$5,002,776 for

the previous year. Current assets were listed at \$3,917,303 at the end of 1957 and liabilities were \$743,731 against assets of \$3.852,774 and liabilities of \$679,188 in 1956. At the end of 1957 inventories were \$2.848,736 as compared with \$2,320,643 in 1956. Sales were not reported.

Graniteville, S. C.—Net profit for Graniteville Co. in the year ended December 28, 1957, was \$1,232,164 against net profit of \$1,783.651 for the comparable period in 1956. Sales and charges totalled \$55,566,731 for 1957 as compared with \$56,855,123 a year earlier. At December 28, total current assets were \$12,963,484 and total current liabilities were \$5,082,759. Assets at the end of 1956 totalled \$13,213,414 with liabilities of \$5,551,404. Inventories amounted to \$10,549,602 against the 1956 total of \$11,360,603.

New York, N. Y.—Riegel Textile Corp. had consolidated net earnings of \$169.955 or 14 cents a share in the 16 weeks ended January 19, 1958, compared with \$704,773 or 72 cents a share in the 16 weeks ended January 19, 1957. Net sales for the company in the 16 weeks of this year were \$23,966,715 against \$26,548,771 in the sixteen weeks of 1957. Income taxes totalled \$199.000 for this year's period against \$814.000 for the comparable 16-week period in 1957.

GOLDSBORO, N. C.—Peacock Textile Inc., organized here 16 months ago, will go into receivership. The move was requested by W. B. Griffin, a stockholder, who said it was prompted by production problems and steady losses since the organization of the firm. W. A. J. Peacock, president of the company, issued an accompanying statement

saying he was in agreement with Griffin's request. The firm produced cotton mop yarn and employed up to 30 persons.

CLEVELAND, TENN. — Peerless Woolen Mills, a member of Burlington Industries, has gone into full production of woolen goods at its new plant here. The new plant will substantially increase the capacity of Peerless Mills in the production of woolen goods for women's wear. Peerless, which has headquarters in Rossville, Ga., is a producer of woolen fabrics for men's and women's clothing, automotive fabrics, blankets and worsted yarns.

SPARTANBURG, S. C.—Reeves Brothers Inc. here manufacturers and converters of cotton textiles, has named the national industrial realtor firm of Frank G. Binswanger Inc., their exclusive real estate agent for the sale or lease of its Grace Cotton Mills property at Rutherfordton, N. C. The Grace plant is a modern one-story brick building, containing 65,000 square feet of floor space, on 52 acres of ground.

ATLANTA, GA.—Fire caused damage to exhaust ducts in the bleachery section of Fulton Bag & Cotton Mills here recently. The company reported the ducts would have to be replaced.

Anderson, S. C. — Anderson Narrow Fabrics Inc. and Narrow Fabrics Finishing Co. here have been purchased by Southern Weaving Co., Greenville, S. C., for an undisclosed cash consideration. The Anderson plants will operate as wholly owned

subsidiaries of Southern Weaving. Their operation will continue without change in personnel. Edgar A. Ross, president of the Anderson firms, will be in charge of all manufacturing operations of the combined plants.

Boston, Mass.—The Kendall Co. here has reported net earnings of \$4,005,000 or \$3.80 per share of common stock for 1957. Net earnings of \$4,114,000 or \$3.90 per share were reported in 1956. Net sales for the company totalled \$106,822,000 in 1957 as compared with \$105,024,000 in 1956. Provisions for Federal, state and Canadian taxes totalled \$4,040,000 for the last year against \$4,750,000 for 1956.

ELKIN, N. C.—Chatham Mfg. Co. here reports that a total of 260 students are registered in the sixth semester of the Chatham Vocational School for its employees. Courses offered at the school include Textile Mathematics I and II; Work Simplification I and II; Dyeing and Finishing II; Basic Education; Mechanical Drawing I; and Loom Fixing.

ROCK HILL, S. C. — Gold-Tex Fabric Corp. here has been awarded a U. S. Army contract for 131,351 linear yards of 37-inch blue cotton denim, 9.85 oz., minimum weight per square yard, two up, one down twill. Dollar value is listed at \$64,799.78.

JOANNA. S. C.—A wage dividend of \$48,000 was paid to employees of the Joanna Cotton Mills Co. January 29 as part of the company's profit sharing plan. This brings the total of profit sharing payments to employees of the firm to \$215,000 for the year 1957. Joanna has operated on a profit sharing basis for 21 years.

SYLACAUGA, ALA.—Avondale Mills earned \$428,014 or 64 cents a common share in the 16 weeks ended December 22, 1957, according to the company's unaudited figures. For the same 16 weeks of 1956, the company earned 52 cents a common share. Avondale will pay its regular quarterly dividend of 30 cents on February 1 to stockholders of record January 15.

LAURENS, S. C.—A net profit of \$135,816 for the 52 weeks ended December 1, 1957, was shown for Laurens Mills here. Net profit for the 53 weeks ended December 2, 1956, was \$121,404. Current assets were \$5,143,756 and liabilities were \$1,055,704 compared with assets of \$5,473,397 and liabilities of \$1,588,277 for the preceding year. Inventories at the beginning of December were \$3,687,885 against \$2,590,965 for the preceding year.

UNION, S. C.—Monarch Mills here had a net profit of \$492,690 for the fiscal year ended December 1, 1957, as compared with a net profit of \$527,246 for the year ended December 2, 1956. Current assets for the company were listed at \$8,791,656 as of December 1 with liabilities of \$1,465,761. Assets in 1956 were \$8,256,690 and liabilities were \$2,518,446 at the end of the preceding year. Inventories were \$7,751,338 in 1957 compared with \$6,830,234 at the end of the preceding year.

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Assistant Manager, Textile Development

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The presentation in this book makes it useful for the practical mill man as well as the textile student. The old classifications dealing with cotton, wool, or silk manufacture have been done away with. In their place has been substituted certain basic precepts which are common to all systems of processing. This technique, therefore, is similar to chemical engineering, where instead of studying certain products, like the manufacture of gasoline, the basic operation, such as distillation or mixing, is studied. An approach of this type gives broader and more useful information than was possible heretofore. It is expected that this will make this book suitable as a text and it is noted that the deans of the textile schools recently stressed a need for books of this type.

This book contains numerous illustrations and graphs. It is complete with an index and a bibliography.

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#### Fiber Testing Lab To Hold Open House

The fiber testing laboratory of the American Cotton Manufacturing Institute at Clemson College will hold open house May 7 and 8. John T. Wigington, director of technical service for A.C.M.I. and in charge of the laboratory at Clemson, said details of the program would be announced later. The laboratory is conducted by A.C.M.I. for the benefit of cotton men and others in the industry.

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#### Textile Students Given Look At Future

Some 53 Georgia Tech senior and graduate textile students were given a preview of their future industrial careers last month at the Georgia Tech dining hall at a dinner sponsored by The Georgia Textile Education Foundation Inc. The students, including eight graduate students and three co-eds, were joined for dinner by 40 executives of Georgia textile companies and by Dr. J. L. Taylor, acting director of the A. French Textile School.

Foundation President John P. Baum of Milledgeville, a vice-president of J. P. Stevens & Co. Inc., said the dinner was held to give the students soon to enter the industry a chance to get acquainted with some of the men who operate Georgia's textile mills. Mr. Baum said he hoped the dinner would become an annual occasion. Dr. Taylor expressed the appreciation of Georgia Tech and the textile school faculty and students for the foundation's continuing efforts to help the school do a better job of training textile engineers. He gave the foundation credit for the modern textile school building and much of its equipment and facilities.

Following the dinner, several industry representatives sketched career opportunities in various phases of the industry. These included: Robert T. (Bobby) Davis, vicepresident of the Swift Spinning Mills Inc., Columbus-'Sales and Merchandising"; Charles Williams, director of research, West Point Mfg. Co., West Point-"Research"; Morris M. Bryan Jr., president, The Jefferson Mills Inc., Jefferson-"Production"; Paul K. McKenney Jr., vice-president, Swift Mfg. Co., Columbus-"Cotton and Raw Materials Purchasing"; C. Callaway Jr., treasurer, Crystal Springs Bleachery, Chickamauga— "Finance"; and Alvin S. Davis, director of industrial relations, Callaway Mills Co., LaGrange-"Personnel, Industrial and Public Relations." T. M. Forbes, executive vice-president of the Cotton Manufacturers Association of Georgia, spoke on the general nature of the textile industry in Georgia.

#### Clemson Establishes Research Department

A department of research has been established in the School of Textiles at Clemson College. Dr. William T. Rainey, professor of textile chemistry and dyeing since 1948, has been appointed head of the new department. The program, announced by Dean Gaston Gage, will be the forerunner of accelerated sponsored research on a collegewide basis. The department was approved by the Board of Trustees in October.

Dr. Rainey, recently on leave from the college to participate in research at Oak Ridge National Laboratories, will draw on the special talents of textile school faculty, and other faculty members of the college as well. A staff of technicians is proposed for routine processing and testing work.

A native of Fayetteville, N. C., Dr. Rainey joined Clem-

son as an assistant professor and was elevated to associate professor in 1950. He is a graduate of Oak Ridge Military Institute, Davidson College and the University of North Carolina, where he received the doctorate in chemistry. He was formerly associated with the Naval Research Laboratory. He has completed research in the use of ultrasonics in textile chemistry processes at Clemson and studies in mechanism of pinacol rearrangement at Oak Ridge. He is inventor of a tube sealing apparatus and has two patents on dyeing processes pending.

Sponsors will bear the cost of the applied Clemson-based research, Dean Gage reports. Research problems will be presented by both industry and the college. When funds and personnel are available, the research department will initiate projects of its own. The program will become self-supporting. The industry-expressed need for additional research in textiles gives impetus on the program's origin in the textile school. "The textile industry," relates Dean Gage, "makes up 70 per cent of South Carolina's total industry. This being true, it is believed there will be ample research requested. With the peculiar facilities of available personnel and equipment at Clemson," he adds, "the field of research is unlimited."

#### Textile Conference Set At N. C. State

A comprehensive conference on textiles is scheduled for March 20 and 21 at North Carolina State College in Raleigh. Sponsored by the textile division of the American Society of Mechanical Engineers, in co-operation with the School of Engineering and the School of Textiles of N. C. State, the textile engineering conference will have as its theme "Cost Control Through Engineering."

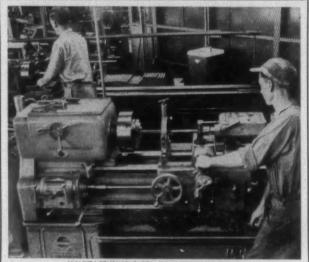
On the first day, seven papers will be presented: "Plant Design and Engineering," by W. A. Bowles, Biberstein, Bowles & Meacham, Charlotte, N. C.; "Air Conditioning, Ventilation and Pneumatic Systems," A. Bahnson Jr., president, Bahnson Co., Winston-Salem, N. C.; "Developments in Materials Handling," by J. C. Whitehurst, James Hunter Inc., Greenville, S. C.; "Survey and Trends in Fiber and Yarn Processing Machinery," W. W. Mitchell, president, Barnes Textile Associates; "Survey and Trends in Fabrics and Fabric Processing Machinery," Kenneth Fox, Fabric Research Laboratory, Dedham, Mass.; "Engineering in Textile Equipment," by Robert Pomeranz, president, Roberts Co., Sanford, N. C.; and "Frontiers of Research in Equipment Modernization," by J. F. Bogdan, head of physical research, School of Textiles, N. C. State.

The principal speaker at the banquet on March 20 will be William H. Ruffin, president of Erwin Mills, Durham, N. C. The second day of the conference will feature seven technical discussion groups. Following are the topics and the moderators for each group: "Materials Handling," V. W. Cook, American MonoRail Co., Charlotte, N. C.; "Non-Woven Materials," E. B. Grover, head of the department





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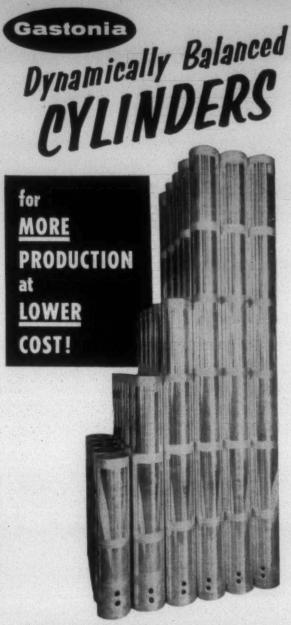
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of fiber and yarn technology, N. C. State; "Warp Preparation," John Bodansky, Cocker Machine & Foundry Co., Gastonia, N. C.; "Carding, Spinning Equipment," G. C. Anderson, Saco-Lowell Shops, Greensboro, N. C.; "Plant Planning and Layout," R. E. Dalton Jr., Whitin Machine Works; "Instrumentation," C. M. Asbill Jr., N. C. State College; "Industrial Engineering in the Textile Industry," D. H. Henderson, Roberts Co., Sanford, N. C.

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This event marks the first time the textile engineering conference has been held in the South.

#### Drought Hurt Texas Textile Industry

Chief responsibility for the failure of the textile industry to make any noticeable gains in Texas in 1957 was laid to acute water shortage due to lack of streams and reservoirs in an article in the January 19 Dallas Times-Herald. Gov. Price Daniel called a special session of the state legislature last Fall to set up a fund to study the lack of water facilities and help combat this menace. Regional textile industrialists were also quoted in the article as saying that the industry will never be stabilized until the federal government gives assistance to curtail some of the Japanese competition. The textile industry is facing a critical period over the next 12 months, the paper reports, and those mills that don't modernize will not survive. Six mills have terminated operations in Texas in the last decade leaving 18 cotton manufacturers in the state, the article concludes.

#### T.R.I. Spring Seminar Schedule Announced

The 1958 Spring seminar schedule for Textile Research Institute, Princeton, N. J., has been announced. All seminars are on Thursday and will be held at the institute laboratories at 2:30 p.m. Following is the schedule of dates, speakers and topics: March 6, W. E. Kauzmann, Textile Research Institute, "Study of Polypeptide Chain Configurations"; March 20, Dr. Irvin M. Gottlieb, Textile Research Institute, "Thermal and Flammability Characteristics of Fibers and Fiber Blends"; April 3, Dr. Charles R. Stock, American Cyanamid Co., Stamford, Conn., "Development of Acrylic Fibers"; April 17, Dr. J. H. Dusenbury and Dr. J. H. Wakelin, Textile Research Institute, "Crimp of Wool Fibers"; May 8, Dr. H. A. Pohl, Princeton University, "Reaction Spinning of Fibers"; May 15, Dr. Lyman E. Fourt, Harris Research Laboratories, Washington, D. C., "Luster of Cotton and Other Fibers''; May 29, G. Hebblewaithe, Textile Research Institute, "Cellulose Derivatives." Advance notice of planned attendance to Dr. L. Rebenfield at the institute is requested. The seminars are completely informal and no written reports are prepared.

#### Four Textile Mills Fail In January

In January 1958, four manufacturers of textile mill products failed with liabilities of \$275,000 compared to ten in January 1957 with aggregate liabilities of \$1,127,000, according to figures released by Credit Clearing House, a division of Dun & Bradstreet Inc.

#### Wash-And-Wear Standards Developed

In an attempt to set up concrete standards for wash-andwear materials, *Good Housekeeping* magazine has set up specific tests and precise standards at its testing laboratories.

The May issue of the magazine will devote a 20-page ection to the presentation of the facts of wash-and-wear fabrics and garments as indicated by its tests. Good Housekeeping points out that consumer demand is increasing for hese fabrics and that some manufacturers have been tempted o shave costs and turn out an inferior product. The article will describe testing methods used for wrinkle-free property, discoloration and loss of tensile strength, shrinkage and construction as well as standards for each,

A special guaranty tag has been developed for use by manufacturers whose products satisfy the standards set up by the magazine. Space is reserved on the tag for the manufacturer's name. A booklet is being prepared detailing the facts of the wash-and-wear story, with a reprint of Good Housekeeping's standards and the wash-and-wear guaranty tag. It will be sent to the clothing buyers of more than a thousand national department stores and to others on request.

#### A.C.M.I. Makes Changes For Merger

One of the final legal changes necessary for the consolidation of the American Cotton Manufacturers Institute and the National Federation of Textiles was approved at a proxy meeting of the A.C.M.I. in Charlotte, N. C., last month, when the group made the needed amendments in the constitution and by-laws. Halbert M. Jones, president of Waverly Mills Inc., Laurinburg, N. C., and first vicepresident of the institute presided in the absence of L. G. Hardman Jr., president of Harmony Grove Mills Inc., Commerce, Ga., who was absent because of illness.

The changes made at the meeting make any mill operating textile machinery eligible for membership, except hosiery mills and those manufacturing fibers by chemical processes. The maximum number of directors was also changed from 24 to 30 and the executive committee was increased from ten to 12 members. A standing committee on man-made fibers and silks was provided for in the changes. The consolidation of the organizations does not become legally effective until after the A.C.M.I. convention April 10-12 at Hollywood, Fla. Members of the N.F.T. have been issued special invitations to attend the convention.

#### N. C. Textile Foundation To Meet March 1

The North Carolina Textile Foundation's annual meeting will be held March 7 at the School of Textiles, North Carolina State College, Raleigh. The date was set at a recent meeting of the executive committee in Charlotte. Eight members of the executive committee attended the luncheon session along with Dean Malcolm Campbell of the School of Textiles, William Newell, co-ordinator of research and E. B. Grover, head of the department of fiber and yarn technology.

#### Cost Reduction Workshop To Be Held

Phil Carroll, registered professional engineer, winner of the Gilbreth Medal and S.A.M. Industrial Award for his engineering achievements, and author of books on the subject of cost control, will conduct a cost reduction workshop on Friday, March 28 from 9 a.m. to 4:30 p.m. at the

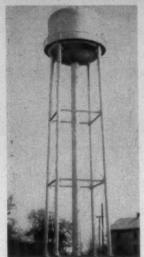
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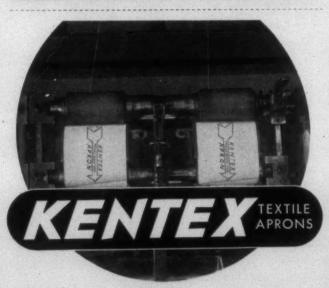


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Architects and Engineers Institute, 230 Spring Street, N.W. Atlanta, Ga. The workshop, which is being presented by the Georgia Chapter, Society for Advancement of Management, will cover the following topics: "How to Find Profit Leaks"; "How to Set Up Proper Budgets"; "How to Set Standards for Indirect Work"; "How to Cut the Cos of Setting Time Standards"; and "How to Use Timestudy Results Correctly." Fee for the workshop is \$10.00 for S.A.M. members, \$15 for non-members and \$5 for students. The fee includes the workshop, luncheon and evening meeting. Registration for the meeting alone is \$2. Registrations are being handled by John M. Avent, Society for Advancement of Management, 4049 Land O'Lakes Drive, N.E. Atlanta 5, Ga.

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#### T.R.I. Annual Meeting Announced

New developments in cellulosic textiles and evaluations of their expanding horizons in the industry will be discussed by authorities in the field at a symposium which forms part of the 28th annual meeting of Textile Research Institute of Princeton, N. J., at the Hotel Commodore in New York City, March 13 and 14, according to G. T. Gardner, executive vice-president of Riegel Textile Corp. and chairman of the T.R.I. Annual Meeting Committee.

This symposium will include six papers covering viscose rayon, acetate and cotton. It will occupy the entire second day of the meeting. A panel discussion of questions and comments submitted by the audience will be held following these presentations with Dr. Paul B. Stam, symposium chairman, serving as moderator. Dr. Stam has recently assummed the post of director of research of J. P. Stevens & Co. Inc.

The Thursday morning session will begin with a summary of institute work—"T.R.I. Research in 1957," presented by Dr. Howard J. White Jr., director of research



DISCUSSING THE RESULTS of extensive laboratory tests on Reeves Bros.' new Bounty group of fabrics woven principally in Avisco rayon, Joe D. Moore (left) vice-president in charge of finished goods sales for Reeves, points out fabric qualities to John C. Wilmerding, manager of the staple sales division, American Viscose Corp. The chart was exhibited at a press review of the new Bounty line, shown for the first time at the International Association of Garment Manufacturers Convention in New York. The group of co-ordinated flannel and covert type suitings carries the Avisco Integrity Tag and is the result of a new method of blending and spinning developed by Reeves. The fabric is said to have greatly improved loft and resilient hand.

at the institute. Following that a paper on "The Physical Properties of Rayon and Nylon 66 Tire Cord at Elevated Temperatures" will be delivered by Dr. Frank R. Charles, director of rayon research, Industrial Cellulose Research Ltd., Hawksbury, Ontario, Canada,

At the Thursday morning session, Dr. Raymond H. Ewell, vice-chancellor for research of the University of Buffalo, will speak on "Research and Education in Russia." Dr. Ewell has just returned from a trip to Russia where he visited research institutes, universities and manufacturing plants. He has an unusual background which combines science and economics. Lately, he has served as assistant director for program analysis of the National Science Foundation and has held important posts at Stanford Research Institute, the National Bureau of Standards, and the Shell Oil Co. He was also a member of the chemistry faculty of Purdue University. Dr. Ewell received his Ph.D. at Princeton with a major in Physical Chemistry in 1937 and has published a number of significant papers.

The first paper of the Thursday afternoon session will be "Synthetic Fibers in Industrial Uses" by Dr. J. M. Swanson, director, industrial products research laboratory, E. I. du Pont de Nemours & Co. Inc. Following this will be a presentation by Dr. R. A. Coleman and W. H. Peacock, of the research division, American Cyanamid Co., on "Ultraviolet Absorbers." This paper will be of special interest because of the growing concern about the effects of light on fibers and the potential textile value of ultraviolet ab-

sorbers.

In accord with custom, the T.R.I. board of trustees will meet at 4:30 p.m. on Thursday to greet newly-elected trustees and elect officers for the ensuing year.

On Friday morning Dr. Paul B. Stam will open the symposium on new developments in cellulosic textiles. The papers of the symposium will be presented as follows: "Non-Textile Applications of Viscose Rayon" by Dr. John A. Howsmon, manager, basic research, American Viscose Corp.; "Whither Rayon" by Dr. John Wharton, Director of Research, Courtaulds (Ala.) Ltd; "Predicting Commercial Acceptance of a Fiber" by Joseph L. Barach, manager of applications development, Celanese Corp. of America; "Recent Developments in Lofted Acetate Yarns" by R. E. Semmler, manager, fabric development, Eastman Chemical Products Inc. and Richard F. Dyer, senior engineer, Tennessee Eastman Co.; "Some Concepts of Cotton Research" by George S. Buck Jr., National Cotton Council of America; "Chemical Modification of Cotton: Progress and Cur-





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rent Status" by C. H. Fisher, director, Southern Utilization Research & Development Division, Agricultural Research Service, U. S. Department of Agriculture. and

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The luncheon session on Friday will be conducted by Richard T. Kropf, vice-president, Belding Heminway Co. Inc. and trustee of T.R.I. He will introduce newly-elected trustees and officers. Walter Regnery, president of the institute and vice-president, Joanna Cotton Mills Co., will speak on "The State of the Institute."

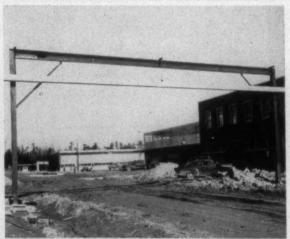
Dr. J. H. Dillon, director of the institute, pointed out that the program of the T.R.I. annual meeting is designed to bring out both the scientific and the practical importance of research developments in the textile field. The meeting is open to all those interested in textile research and development.

Registration fee for the meeting is \$8.00 and luncheon tickets are available at \$5.00 per day. Reservations may be made by writing the secretary, Textile Research Institute, P. O. Box 625, Princeton, N. J.

#### U. S. Rayon And Acetate Production Down

U. S. production of rayon and acetate during 1957 amounted to 1,139,400,000 pounds, a decline of one per cent from 1956 output of 1,147,900,000 pounds, according to the annual presentation of man-made fiber data in the *Textile Organon*, statistical bulletin of the Textile Economics Bureau Inc. This small decline from 1956 was comprised of lower production of rayon yarn and acetate staple+tow, but increased output of acetate filament yarn and rayon staple+tow. Aggregate 1957 shipments of rayon and acetate by domestic producers were 1,116,500,000 pounds or 22,900,000 pounds less than production, meaning producers' stocks were increased by that amount over the 12-month period.

Total U. S. output of the man-made fibers in 1957 was at a record level of 1,764,600,000 pounds, an increase of  $7\frac{1}{2}$  per cent over 1956 and three per cent above the previous record of 1,715,800,000 pounds produced in 1955. Thus the noted decline of 8,500,000 pounds in rayon



ZEFRAN, The Dow Chemical Co.'s new textile fiber, will be produced this Spring at Lee Hall, Va. Pictured above are a small portion of the production building (foreground), also the warehouse, shop-and-maintenance and personnel buildings, comprising the first line of structures paralleling the James River on the Dow site. The second main line of buildings (not pictured here) includes research, textile development and administration. Final installation of equipment in the production units is now in progress.

and acetate production was more than offset by an increase of 115,300,000 pounds or 29 per cent in non-cellulosic fiber output and an increase of 13,100,000 pounds or 131/2 per cent in the production of textile glass fiber to a total of 109,600,000 pounds. Non-cellulosic filament yarn+monofilament production totalled 335,000,000 pounds, 221/2 per cent above 1956 for a new annual record, while the 1957 non-cellulosic staple+tow output at 180,600,000 pounds was 42 per cent above the 1956 level and also at a new high level.

#### **Wool Consumption Decreases**

The U.S. Department of Commerce reports that the aggregate fiber consumption on the woolen and worsted systems in December 1957 was 39,922 thousand pounds compared with 51,631 thousand pounds in December of 1956. The weekly average rate of fiber consumption was seven per cent below the November rate and 23 per cent below that of December 1956. For the year 1957, fiber consumption was ten per cent below the 1956 level. The weekly average raw wool consumption during December was 5,187 thousand pounds (scoured basis) or five per cent below the November level, and 34 per cent below that of December 1956. Consumption of apparel class wool was five per cent below the November level and 37 per cent below that of December of the previous year. For the year 1957, consumption of apparel class wool was 18 per cent below that of 1956.

Consumption of carpet class wool was seven per cent below the rate of the preceding month and 29 per cent below the December 1956 rate. In 1957, consumption of carpet class wool was ten per cent lower than the 1956 level. Consumption of fibers other than raw wool averaged 4,794 thousand pounds per week in December, or nine per cent below the November average and five per cent below December 1956. The year showed a two per cent decrease in consumption from 1956.

#### Use Of Cotton, Man-Made Staple, Linters Down

Figures on the December 1957 consumption of cotton, man-made staple and linters in this country have been issued by the U. S. Department of Commerce. Total consumption of cotton was 571,287 running bales as compared with 656,205 bales for November 1957, and with 630,339 bales for December 1956. Total for the five-month period through December was 3,373,508 as against 3,738,808 for the corresponding period in 1956. Cotton growing states accounted for 543,140 bales and New England accounted for 24,189. Stocks of cotton totalled 14,171,385 at the end of the month, slightly above the total of 12,772,490 at the end of November but below the December 1956 total of 17,981,338. Total consumption of foreign cotton reached 6,449 bales. Stocks of imported cotton were shown at 56,-694 at the month's end. Consumption in December of the

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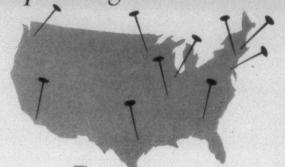
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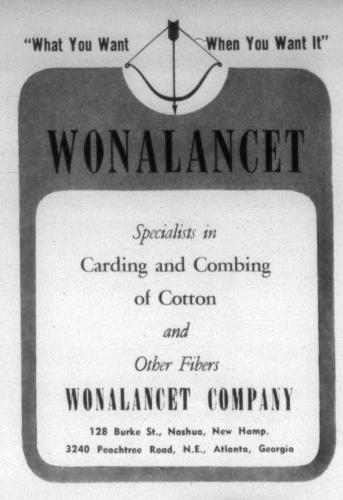
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previous year was 4,386 bales with stocks of 30,397 shown at the end of the month. For the five-month period through December, consumption was 30,147 bales against 26,229 for the same period of 1956.

Man-made fiber staple consumption for the month was 30,482,000 pounds against 36,184,000 for the month of November and 32,547,000 pounds in December of 1956. Consumption for the five-month period ended December 31 was 187,691,000 pounds as compared to a total of 187,644,000 pounds for the same period in 1956. Stocks totalled 50,344,000 at the end of the month against 51,-129,000 at the end of November and 49,285 at the end of December of the previous year. Some 21,075,000 cottonsystem spindles were shown to be in place at the end of December 1957 with 21,103,000 shown in place at the end of November and 21,554,000 shown in place at the end of December 1956. Total consumption of linters for December 1957 was 100,208 running bales, slightly below the November figure of 102,965 bales and considerably below the December 1956 total of 126,012 bales. For the five months ended December 31, the total consumption was 515,096 bales as compared with the 1956 total of 596,755.

#### Cotton Imports Show Sharp Increase

Total imports of foreign cotton for the month of November 1957 was 27,717 bales. For the same month in 1956 the total was 2,014 bales. For the four months through November 1957 the cotton import total was 82,742 bales against 29,361 in the same period of the previous year.

Imported linters totalled 12,612 bales for November as compared with 11,950 for November 1956. In the fourmonth period through November the total was 39,161 with a total of 58,458 for the same period in 1956.

Man-made fiber staple imports for the month reached 5,958,000 pounds with a total of 5,744 for November 1956. Some 25,036,000 pounds were imported in the fourmonth period against a total of 24,769,000 pounds in the same period of 1956.

#### Synthetic Broad Woven Goods-1956

The production of man-made fiber and silk broad woven fabrics totalled 2,290 million linear yards in 1956, according to the Bureau of the Census. This was 13 per cent lower than the 1955 output of 2,627 million linear yards and two per cent below the 1954 level.

Rayon and acetate broad woven fabric production was 1,626 million linear yards. This compares with 1955 and 1954 production of 1,928 and 1,731 million linear yards, respectively. The 1956 production of 100 per cent filament rayon and acetate yarn fabrics was 11 per cent below the 1955 level and seven per cent below the output in 1954. The production of 100 per cent spun rayon and acetate yarn fabrics amounted to 351 million linear yards, and was 33 per cent below the 1955 level.

The production of nylon fabrics was 286 million linear yards as compared to the 1955 production of 395 million yards and the 1954 production of 383 million yards. Other man-made fiber fabric production in 1956 rose to 378 million linear yards from the 1955 and 1954 levels of 304 and 229 million linear yards, respectively. This growth was primarily due to the production increase of polyester fiber fabrics.

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